DOCUMENT RESUME

ED 430 174 CG 029 255

AUTHOR Kerber, Lisa; Wallisch, Lynn
TITLE Texas Survey of Substance Use among University Students, 1997.
INSTITUTION Texas State Commission on Alcohol and Drug Abuse, Austin.
SPONS AGENCY Substance Abuse and Mental Health Services Administration (DHHS/PHS), Rockville, MD. Center for Substance Abuse Prevention.
PUB DATE 1999-03-00
NOTE 72p.
CONTRACT 277-94-1021
AVAILABLE FROM Texas Commission on Alcohol and Drug Abuse, P.O. Box 80529, Austin, TX 78708-0529; Tel: 512-349-6600; Tel: 800-832-9623 (Toll Free); Web site: www.tcada.state.tx.us.
PUB TYPE Reports - Research (143)
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Alcohol Abuse; *College Students; Drinking; Driving While Intoxicated; *Drug Use; Educational Policy; Health Services; Higher Education; Intervention; Outcomes of Treatment; Prevention; Risk; *Substance Abuse; Tables (Data); Tobacco
IDENTIFIERS Gambling; Inhalants; *Texas

ABSTRACT

This report presents findings of the 1997 survey of substance use and related behaviors among university students in Texas. The objectives of the study were to determine the number and characteristics of students who use and misuse substances; to highlight the relationship between misuse and other risky behaviors; and to estimate the need for prevention, intervention, and treatment services. This information can be used by policy makers, substance abuse prevention and treatment professional, educators, and university personnel to refine existing alcohol and drug policies on college campuses across the state; to develop effective, targeted prevention and intervention programs for college students; and to plan for a variety of health services that students may need. This report also compares the prevalence of substance use and misuse of college students to those of college students nationwide. Appendix A presents six substance use prevalence tables and Appendix B lists gambling questions. (Contains 58 references, 37 tables, and 9 graphs.) (Author/MKA)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 430 174

1 9 9 7

Texas Survey of Substance Use Among University Students

Tobacco Use

Alcohol Use and Misuse

Binge Drinking

Inhalant Use and Misuse

Illicit Drug Use and Misuse

Gambling Behavior

Drinking and Driving

Consequences of Substance Misuse

Current Need for Intervention

Students' Treatment Experiences

Policy Implications

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

A. CARR

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Texas Commission on Alcohol and Drug Abuse

CG029255

BEST COPY AVAILABLE

1997 Texas Survey of Substance Use Among University Students

by

Lisa Kerber, M.A.

and

Lynn Wallisch, Ph.D.

Texas Commission on
Alcohol and Drug Abuse
www.tcada.state.tx.us

BEST COPY AVAILABLE

Acknowledgements

Many people have contributed to the *1997 Texas Survey of Substance Use Among University Students*. Special thanks go to James Dyer, Ph.D., and his staff at the Public Policy Research Institute (PPRI) of Texas A&M University who provided expert assistance in survey design, sampling, weighting, and data collection. We would also like to thank Wesley Perkins, Ph.D., for providing many of his published and unpublished articles.

At the Texas Commission on Alcohol and Drug Abuse (TCADA), we would like to thank Leo Paterra, deputy director of quality assurance, and Richard Spence, Ph.D., assistant deputy director of research and technology transfer, for providing guidance throughout the project, and Rand Harris, M.A.T., for performing preliminary analyses. Many thanks are also due to Jane C. Maxwell, Ph.D., director of needs assessment, for her comments and suggestions at all stages of the research process, from survey design and questionnaire development to analysis and writing. Acknowledgment is also due to research editor Amy T. Carr who edited, designed, and coordinated the electronic and print production of the final report.

© March 1999, Texas Commission on Alcohol and Drug Abuse (TCADA), Austin, Texas. TCADA grants full permission to reproduce and distribute any part of this document for non-commercial use. Appropriate credit is appreciated. TCADA is a state agency headed by six commissioners appointed by the governor. TCADA provides educational materials on substance use, develops prevention, intervention, and treatment programs, and conducts studies on the problems of substance use in Texas.

This publication was supported by Contract No. 277-94-1021 under the Center for Substance Abuse Prevention.

Texas Commission on Alcohol and Drug Abuse
PO Box 80529 · Austin, Texas 78708-0529
9001 N. IH 35, Ste. 105 · Austin, Texas 78753-5233
(512) 349-6600 · (800) 832-9623
Web site: www.tcada.state.tx.us

This document was printed on recycled paper.

Table of Contents

Executive Summary v

Chapter 1. Introduction 1
Summary 1
The Sample 1
Questionnaire and Interview 2
Terminology 3
Limitations 4
Statistical Analysis 4

Chapter 2. Prevalence of Licit Substance Use and Misuse 7
Tobacco 7
Alcohol 7
Factors Related to Alcohol Use and Misuse 8
Demographic Factors 8
Lifestyle Factors 9
Home Brewing Kits 10
Academic Major 11
High School Drinking Behavior 12
Perceptions of Peer Alcohol Use 13
Multivariate Analysis: Factors Most Strongly Associated with Binge Drinking 14
Reasons Students Did Not Drink Alcohol 15
Inhalants 16

Chapter 3. Prevalence of Illicit Substance Use and Misuse 19
Marijuana 20
Cocaine/Crack 20
Uppers 20
Downers 21
Heroin and Other Opiates 21
Psychedelics 21
Club Drugs 22
Steroids 23
Multivariate Analysis: Factors Most Strongly Associated with Illicit Drug Use 23

Chapter 4. Comparison to College Students Nationwide 25

Chapter 5. Other Risky Behavior Associated with Substance Misuse 27
Gambling and Problem Gambling 27
Prevalence of Gambling Among College Students 27
Frequency of Betting 28
Problem Gambling 28
Factors Related to Gambling and Problem Gambling 29
Drinking and Driving 30
Risky Sex 31

BEST COPY AVAILABLE

Chapter 6. Consequences of Substance Misuse 35
Substance Use and School Performance 35
Other Problems Related to Substance Use 36
Comparison to Students Nationwide 36
Problems Related to Someone Else's Drinking 37
Drugs Ingested Unknowingly 38

Chapter 7. Current Need for Intervention Services and Students' Treatment Experience 39
Need for Intervention Services 39
Previous Treatment Experience 40

Chapter 8. Student Knowledge and Opinions of Substance-Related Policies and Programs of Universities 41

Chapter 9. Conclusions 45
Summary 45
Policy Implications 46

Bibliography 49

Appendix A. Substance Use Prevalence Tables 53

Appendix B. Gambling Questions 60

BEST COPY AVAILABLE

1997 Texas Survey of Substance Use Among University Students

Executive Summary

In the spring of 1997, the Texas Commission on Alcohol and Drug Abuse (TCADA), in conjunction with the Public Policy Research Institute (PPRI) of Texas A&M University, conducted a telephone survey of substance use and related behaviors among full-time undergraduate students in Texas aged 18 to 26. Some 2,420 randomly selected students from seven of the eight largest public universities and the three largest private universities participated in the study.

Licit Substance Use

Tobacco

- Nearly half (45 percent) of all college students have used tobacco sometime in their lives; 26 percent have used tobacco in the past month.
- Forty-two percent of students have ever smoked cigarettes, and 24 percent have smoked cigarettes in the past month.
- The percentage of students in Texas who have smoked cigarettes in the past month was less than the percentage of students nationwide who have smoked in the past month (29 percent in 1997).
- College students in Texas were more likely to smoke cigarettes than use smokeless tobacco. Thirteen percent of college students have ever used smokeless tobacco, and 6 percent have used smokeless tobacco in the past month. Among students who have used smokeless tobacco, 89 percent were Anglo males.

Alcohol

- Alcohol was the number-one substance that college students reported using. Eighty-eight percent of students have drunk an alcoholic beverage at least once during their lifetimes, 82 percent have drunk alcohol in the past year, and 69 percent have drunk alcohol in the past month.
- Although the legal drinking age in Texas is 21, 60 percent of students aged 18 to 20 reported drinking an alcoholic beverage within the past month. Most underage college students (90 percent) reported obtaining alcohol from someone aged 21 or older.
- A substantial percentage of students (29 percent) reported bingeing on alcohol, which is drinking five alcoholic beverages in a row for men and four drinks in a row for women on two or more occasions within the past month.
- Anglos and Hispanics had higher percentages of binge drinkers, 33 percent and 27 percent, respectively. African American students had the lowest percentage of binge drinkers. Anglos had the highest prevalence of getting drunk often (20 percent) and abusing alcohol (17 percent).
- Students with parents earning over $60,000 a year were more likely than students from less wealthy families to currently drink, binge drink, and abuse alcohol. Members of fraternities/sororities were also more likely than non-members to currently drink, binge drink, and abuse alcohol.
- Students who binge drank during their last year in high school were much more likely (61 percent) than students who did not binge drink during their last year (19 percent) to be binge drinkers in college.

Sixty percent of students aged 18 to 20 reported drinking an alcoholic beverage within the past month even though the legal drinking age is 21.

- Among students who abstained from drinking, large percentages said that they did not drink because it was bad for their health (91 percent), it was against their values (90 percent), they did not want to lose control (88 percent), and alcohol interfered with studying (81 percent).

Inhalants

- Five percent of college students reported ever having used inhalants. One percent had used inhalants in the past month. Nitrous oxide was the most common inhalant used among college students.

- Binge drinkers (11 percent) were nearly four times as likely as non-binge drinkers (3 percent) to report ever using inhalants.

Illicit Substance Use

Any Illicit Drug

- Twenty-three percent of all students have used an illicit drug in the past year, and 14 percent have used an illicit drug in the past month.

- The most significant predictors for current illicit drug use were being a binge drinker in high school and in college, and considering participation in the arts, music, and drama to be very important.

Twenty-three percent of all students have used an illicit drug in the past year, and 14 percent have used an illicit drug in the past month.

Twenty-nine percent of all students have used marijuana during their lifetimes; 11 percent of students have used it during the past month.

Marijuana

- Of all illicit drugs, marijuana was the most popular. Twenty-nine percent of all students have used marijuana during their lifetimes; 11 percent of students have used it during the past month.

- Males (15 percent) were twice as likely as females (7 percent) to smoke marijuana in the past month. Anglos and students who came from wealthier families were also more likely to smoke marijuana in the past month.

Cocaine/Crack

- Five percent of college students reported using powder cocaine at least once during their lifetimes, and 1 percent of students reported using powder cocaine in the past month.

- Less than 2 percent of students have ever used crack cocaine.

Uppers

- Ten percent of all students reported ever using uppers; only 2 percent of students have used them in the past month.

Downers

- Six percent of students have ever used downers during their lifetimes; only 2 percent of students have used downers in the past month.

Heroin and Other Opiates

- Less than 1 percent of students reported ever using heroin.

- About 8 percent of students reported ever using other opiates (codeine, demerol, percodan, and others); 2 percent of students have used other opiates during the past month.

Psychedelics

- Twelve percent of students reported using psychedelics at least once during their lifetimes, and 3 percent of students reported use during the past month.

- The use of psychedelics such as mushrooms, mescaline, or PCP was more popular among college students than LSD.

Club Drugs

- Less than 8 percent of students reported using Ecstasy, GHB, Ketamine, or Nexus in their lifetimes; 1 percent of students have used these club drugs in the past month.

Comparisons to College Students Nationwide

- Findings on past-year and past-month substance use were remarkably similar between college students in Texas and college students nationwide, with the exception of past-year marijuana use. The percentage of marijuana users in Texas was slightly lower (18 percent) than the percentage of marijuana users nationwide (24 percent).

- College students in Texas also tended to binge drink less than students nationwide. The

percentage of binge drinkers on campuses nationwide was 44 percent, compared to 29 percent on Texas campuses.

Other Risky Behavior Associated with Substance Misuse

Gambling and Problem Gambling

- Sixty-eight percent of college students in Texas said they have placed a bet for money within the past year. This percentage was nearly identical to that of adults (68 percent) and teenagers (67 percent) in the general population of Texas.

- The lottery was the most popular betting activity. Fifty-four percent of all college students reported playing the lottery in the past year.

- Among all students, only 0.3 percent scored as pathological gamblers, and only 0.7 percent more scored as problem gamblers, meaning that a total of about 1 percent of college students could be considered problem or pathological gamblers. These percentages were significantly lower than those found among teens and adults interviewed as part of the Texas surveys of gambling behavior, which found combined percentages of problem and pathological gambling to be 12 percent for teens aged 14 through 17, almost 8 percent for young adults aged 18 through 24, and 3 percent for adults overall.

- While problem/pathological gamblers represented about 1 percent of all students who had gambled in the past year, they represented 3 percent of binge drinkers who had gambled, 6 percent of students who reported any negative consequences as a result of their drinking, and 9 percent of students who described themselves as heavy or problem drinkers.

Sixty-eight percent of college students in Texas said they have placed a bet for money within the past year.

Drinking and Driving

- About 39 percent of students who drank alcohol in the past month said they have driven after drinking within the past month, and 15 percent said they have driven after drinking five or more drinks. Thirteen percent of all students believed they could consume four or more drinks in an hour and still drive safely.

- Many students served as designated drivers (50 percent) and took advantage of designated drivers (42 percent). Unfortunately, about 21 percent of students still reported riding as a passenger with a drunk driver in the past month, and some students (14 percent) reported drinking more than one drink when they last served as a designated driver.

- Among students who drank alcohol in the past month, binge drinkers were more likely than non-binge drinkers to drive after drinking, drive after consuming five or more drinks, and believe they could still drive safely after drinking more than one drink.

Risky Sex

- About 18 percent of sexually active students reported they were drinking the last time they had sex, and about 3 percent said they were using drugs the last time they had sex.

- Among sexually active students who have drunk alcohol in the past year, 8 percent said that at least once they failed to use protection against pregnancy or sexually transmitted diseases (STDs) *as a result of drinking alcohol.*

- Men were more likely than women to be sexually active, to have been drinking alcohol the last time they had sex, and to have ever failed to use protection as a result of drinking.

- Members of fraternities/sororities, students with two or more sexual partners, binge drinkers, and alcohol abusers were more likely to fail to use protection as result of drinking alcohol.

Consequences of Substance Misuse

- Students believed alcohol abuse was much more of a problem on campus than drug abuse. Forty-seven percent believed heavy

About 28 percent of students said they have driven after drinking within the past month, and 10 percent said they have driven after drinking five or more drinks.

Forty-seven percent believed heavy alcohol use was a "major" problem, but only 12 percent of students believed drug abuse was a "major" problem.

alcohol use was a "major" problem, but only 12 percent of students believed drug abuse was a "major" problem.

- Of students who have drunk alcohol in the past year, 52 percent have had a hangover; 30 percent have regretted something that they did while under the influence of alcohol; 25 percent have argued with a friend; 19 percent have had temporary memory loss; 9 percent have physically hurt themselves; 6 percent have caused property damage; and 5 percent have gotten into trouble with the police as a result of drinking.

- The misuse of alcohol is related to poor grades. Binge drinkers were less likely than non-binge drinkers to earn A's and more likely to receive C's, D's, and F's. Binge drinkers were also nearly five times as likely (54 percent) as non-binge drinkers (11 percent) to miss class due to drinking, and they were nearly four times as likely (39 percent) as non-binge drinkers (10 percent) to fall behind in school work due to drinking.

- Among students who have used drugs in the past year, 39 percent reported having a hangover, 18 percent reported falling behind in school, 15 percent reported having had temporary memory loss, and 7 percent reported having withdrawal symptoms as a result of using drugs.

Current Need for Intervention Services and Students' Treatment Experience

- Sixteen percent of all Texas college students were abusing drugs and/or alcohol at the time of the survey, meaning that they have suffered six or more negative experiences due to their substance use since the beginning of the school year.

- Only 8 percent of binge drinkers and 14 percent of alcohol abusers believed they had a drinking problem. The students who were abusing alcohol at the time of the survey and admitted they had a drinking problem represented about 2 percent of the entire college population.

- Students who were abusing alcohol and who did not believe they had a drinking problem may represent the students most in need of services but least likely to take advantage of them. These students (86 percent of all alcohol abusers and 13 percent of the entire student body) might benefit from education and intervention that encourages recognition of their problems and provides strategies for dealing with them.

Only 8 percent of binge drinkers and 14 percent of alcohol abusers believed they had a drinking problem.

- Three percent of all students reported that they have ever wanted to reduce or stop their use of drugs, but could not. Less than 1 percent of all students were abusing drugs at the time of the survey and admitted that they had a drug problem.

- About 3 percent of all students have received counseling or treatment for an alcohol and/or drug related problem since starting college.

Student Knowledge and Opinions of Substance-Related Policies and Programs of Universities

- The majority of students reported that their universities allowed drinking but had specific policies to discourage drunkenness, prevent student drinking, and/or encourage responsible drinking.

- About 90 percent of all students said they would support their university if it were to require the offering of non-alcoholic beverages when alcohol is served at campus events, if it were to make the rules concerning alcohol more clear, and if it were to provide more alcohol-free events. About 75 percent would like to see stricter enforcement of rules and the offering of alcohol-free dormitories.

- Fewer than half of all students said they have received information from their universities about the dangers of drinking. Some 42 percent have received information about the dangers of alcohol overdose, 41 percent

have received information about the long term health effects of heavy drinking, and 40 percent have received information about how to recognize someone with a drinking problem.

Policy Implications

- Because of the high prevalence of alcohol misuse on college campuses in Texas, the misuse of alcohol should be a major focus for prevention and intervention programs.

- Programs and public awareness initiatives can help to change the misperception that binge drinking and alcohol abuse are normal behaviors on campus. University-wide studies and awareness campaigns should emphasize the percentage of students who do not misuse alcohol, rarely drink, or do not drink at all so that students can begin to sense that responsible drinking or abstinence, rather than binge drinking, is the norm.

- Because many students do not respect the legal drinking age of 21, community members and university representatives should take a more active stance and work together to enforce the legal drinking age.

- Many students began to misuse alcohol prior to college. Since drinking behaviors begin in high school, high school prevention and intervention programs need to be strengthened.

- Alcohol abuse prevention programs should target those students who are at greater risk: men, Anglos, Hispanics, and wealthier students. Students at higher risk also included those majoring in agriculture and business and students who participate in particular organizations, such as male intercollegiate sports and fraternities/sororities.

- Despite being aware of the dangers of driving while intoxicated, many students still engaged in drunk driving and/or rode with intoxicated drivers. Universities should take an active role in setting up and promoting designated driver programs on and around campus.

- Campus organizations and university administrators should incorporate discussions about the misuse of alcohol and risky sex in prevention and intervention initiatives.

Chapter 1. Introduction

SUMMARY

This report presents findings of the 1997 survey of substance use and related behaviors among university students in Texas. The objectives of the study, the first of its kind in Texas, were to determine the number and characteristics of students who use and misuse substances; to highlight the relationships between substance misuse and other risky behaviors; and to estimate the need for prevention, intervention, and treatment services among college students in Texas. This information can be used by policy makers, substance abuse prevention and treatment professionals, educators, and university administrators to refine existing alcohol and drug policies on college campuses across the state; to develop effective, targeted prevention and intervention programs for college students; and to plan for a variety of health services that students may need. This report also compares the prevalence of substance use and misuse of college students in Texas to those of college students nationwide.

Several studies done at the national level have provided overwhelming evidence that alcohol is the substance of choice among college students.[1] For example, a national survey on drug abuse in 1997 showed that alcohol is by far the most often used substance among full-time college students, followed by tobacco, marijuana, and hallucinogens.[2] Another national study in 1997 showed that college students were more likely than their peers who did not attend college to engage in heavy episodic drinking, or binge drinking. According to that study, about 43 percent of all college students in the nation binge drank.[3]

Because alcohol is much more prevalent on college campuses than other drugs, it is the substance most associated with problems.[4] Not surprisingly, students who binge drink are more likely than students who drink moderately to experience negative consequences due to their alcohol use, and they are more likely to engage in other risky behaviors besides binge drinking.[5] Many students also suffer harm as a result of others' misuse of alcohol. They experience "secondary binge effects," such as interrupted study and sleep, unwanted sexual advances, destruction of property, and assault.[6] Recently, a number of student deaths that resulted from alcohol poisoning or alcohol-related accidents in Texas and other states have been highly publicized.

Some 2,420 randomly selected students from seven of the eight largest public universities and the three largest private universities participated in the study.

THE SAMPLE

In the spring of 1997, the Texas Commission on Alcohol and Drug Abuse (TCADA), in conjunction with the Public Policy Research Institute (PPRI) of Texas A&M University, conducted a survey of

Table 1.1. Description of Public and Private Universities From Which Students Were Sampled: Texas, 1997

	Total Enrollment	Full-time Undergraduate	Completed Interviews	Total Sample
Public Universities				
University of Texas at Austin	47,957	35,789	379	15.7%
Texas A&M University	43,256	31,825	485	20.0%
University of Houston	31,298	21,522	255	10.5%
University of North Texas	25,605	17,296	189	7.8%
Texas Tech University	24,083	18,187	280	11.6%
University of Texas at Arlington	23,280	14,709	145	6.0%
University of Texas at San Antonio	17,577	13,246	174	7.2%
Private Universities				
Baylor University	12,240	10,346	243	10.0%
Southern Methodist University	9,014	4,642	56	2.3%
Texas Christian University	6,481	5,587	214	8.8%
Total	240,791	172,149	2,420	100.0%

Table 1.2. Description of College Student Sample: Texas, 1997

	N	Percent Unweighted	Percent Weighted
Gender			
Male	1,287	53.2%	49.6%
Female	1,133	46.8%	50.4%
Race/Ethnicity			
Anglo	1,708	70.6%	68.5%
Hispanic	355	14.7%	15.6%
Asian, Pacific Islander, Indian	206	8.5%	9.3%
African American	130	5.4%	5.9%
Native American	21	0.9%	0.8%
Age			
Age 18 to 20	1,206	49.8%	48.4%
Age 21 to 26	1,214	50.2%	51.6%
Religion Growing Up			
Protestant	1,469	60.7%	58.3%
Catholic	677	28.0%	28.7%
None or Agnostic	157	6.5%	7.1%
Other*	89	3.7%	4.3%
Jewish	26	1.1%	1.4%
Marital Status			
Single	2,297	94.9%	94.6%
Married	123	5.1%	5.4%
Annual Parental Household Income			
Less than $10,000	33	1.4%	1.5%
$10,000 to $20,000	122	5.0%	5.3%
$20,000 to $40,000	419	17.3%	17.6%
$40,000 to $60,000	552	22.8%	23.6%
Greater than $60,000	1,154	47.7%	46.1%
Don't Know/Refused	140	5.8%	5.9%
Class Standing			
Freshman	530	21.9%	20.6%
Sophomore	520	21.5%	20.6%
Junior	526	21.7%	24.0%
Senior	844	34.9%	34.8%
Fraternity/Sorority Member			
Non-Member	1,982	81.9%	84.8%
Member	438	18.1%	15.1%

*"Other" includes Moslem (n=30), Buddhist (n=29), Hindu (n=22), Baha'i (n=4), and unspecified (n=4).

substance use and related behavior among full-time undergraduate students in Texas, aged 18 to 26.[2] Some 2,420 randomly selected students from seven of the eight largest public universities[3] and the three largest private universities participated in the study. Table 1.1 shows the universities from which students were sampled, the number of enrolled students, and the number of interviews completed. The number of students interviewed at each school was roughly proportionate to the total number of students enrolled at each school, and during analyses, weights were applied to ensure that the sample data accurately represented the population of the selected schools in terms of the proportions of females and males and the proportions of freshmen, sophomores, juniors, and seniors. Table 1.2 is a description of the sample.

QUESTIONNAIRE AND INTERVIEW

The survey asked about student life (housing, academic major,

grade point average, and extracurricular activities); students' knowledge of their school's drinking policies and programs; and students' use of licit and illicit drugs and associated problems students might have experienced. It also addressed gambling, sexual behaviors, and high school behaviors related to substance use. The Texas survey utilized an interview instrument largely drawn from that of Wechsler (1996) and Wechsler et al. (1995a, 1996).[9] The interviews were conducted anonymously by telephone, and the average interview lasted approximately half an hour. The final cooperation rate for this survey, before screening for eligibility, was 70 percent. The cooperation rate after screening (including only those students who were eligible to participate) was 89 percent.[10]

TERMINOLOGY

Licit substances refer to tobacco, inhalants, and alcohol (even though alcohol use may be illicit for individuals under the age of 21). *Current use* of alcohol or drugs refers to the use of alcohol or drugs in the past month, while *past-year use* refers to use in the past year including the past month. *Lifetime use* refers to having ever used a substance.

Binge drinking for men refers to drinking five or more alcoholic beverages in a row on two or more occasions in the past month. For women, *binge drinking* refers to the consumption of four or more alcoholic beverages in a row on two or more occasions in the past month.[11]

Frequent binge drinking refers to binge drinking on six or more occasions during the last month.[12] *Binge drinking in high school* refers to *usually* binge drinking during the last year of high school. *Getting drunk often* refers to becoming drunk on three or more occasions within the past month. *Alcohol misuse* refers to any of the following: binge drinking, frequent binge drinking, getting drunk often, or alcohol abuse.

According to the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)* (1994), the criteria for substance abuse include repeated failure to fulfill major role obligations, recurrent use of substances in situations when use is physically hazardous (e.g. driving while intoxicated), and repeated use in the presence of multiple legal problems (e.g. arrests), and/or recurrent social and interpersonal problems (e.g. arguments). In this study *alcohol abuse* is a measure based on similar negative consequences of drinking. An index of alcohol abuse was constructed from responses to a list of 12 potential consequences. Respondents indicated if any of the following negative experiences occurred once or more than once since the beginning of the school year as a result of their own drinking: 1) had a hangover, 2) missed a class, 3) fell behind in school work, 4) did something they later regretted, 5) forgot where they were or what they did, 6) argued with friends, 7) did not use protection when they had sex, 8) damaged property, 9) got into trouble with campus or local police, 10) got hurt or injured, 11) required medical treatment for an alcohol overdose, or 12) drove after drinking five or more drinks. The index consisted of a score in which one point was added for each negative consequence that a respondent experienced more than once. Scores potentially ranged from zero to twelve, but no respondent scored above nine. In this report a composite score of three or more, which represents six or more negative experiences as a result of drinking since the beginning of the school year, is considered *alcohol abuse*.

Drug abuse, like alcohol abuse, is a measure based on the negative consequences of using illicit drugs and inhalants. An index of drug abuse was constructed from a list similar to the 12 potential consequences of alcohol use. Respondents indicated if any of the following negative experiences occurred once or more than once since the beginning of the school year as a result of their own drug use: 1) had a hangover, 2) missed a class, 3) fell behind in school work, 4) did something they later regretted, 5) forgot where they were or what they did, 6) argued with friends, 7) did not use protection when they had sex, 8) dam-

Alcohol misuse refers to any of the following: binge drinking, frequent binge drinking, getting drunk often, or alcohol abuse.

aged property, 9) got into trouble with campus or local police, 10) got hurt or injured, and 11) had withdrawal symptoms. The index was constructed using the same methodology used to define alcohol abuse. Scores potentially ranged from zero to eleven, with ten being the highest score reported for this study. Again, a composite score of three or more, which indicates six or more negative experiences as a result of using drugs since the beginning of the school year, represents *drug abuse*.

LIMITATIONS

This report provides prevalence estimates of substance use and misuse and of certain other behaviors among college students in Texas. This information can be useful for designing and implementing policy and prevention programs. However, some limitations should be kept in mind when interpreting the data and findings. Since only full-time undergraduates in the largest four-year colleges and universities were sampled, the findings of this study can only be generalized to the population of full-time undergraduates at these same universities.[13]

A potential source of bias in any survey is the understatement or overstatement of actual behavior. Many studies have established the utility of using self-reported information to estimate the prevalence of substance use and risky behavior.[14] However, the validity of such data ultimately depends on the truthfulness, recall, and comprehension of the respondents. It is generally assumed that, out of concern for privacy or social desirability or for fear of repercussion, people tend to underreport behavior that they perceive as sensitive or deviant. In the case of college students, however, the opposite may be true. Some college students may exaggerate certain behaviors that they consider "more adult" or "exciting." We carefully designed and administered this survey to minimize these potential sources of error. Nevertheless, some over- or underreporting may have occurred. Despite its inherent limitations, the survey process is the only practical method available for estimating the prevalence of these kinds of behaviors.

It should be emphasized that none of the findings in this report can determine causal relationships. A cross-sectional study such as this one cannot determine whether, for example, binge drinking causes certain behaviors or if certain behaviors or characteristics cause binge drinking. This report is valuable in that it highlights the relationships among factors and the strength of these relationships for different groups of students.

STATISTICAL ANALYSIS

The data were analyzed using cross-tabulations and logistic regressions. Logistic regression is a form of statistical data analysis that allows an assessment of the relationship between an outcome (*dependent variable*), such as alcohol use, and one or more predictors (*independent variables*), such as demographic characteristics that are thought to be associated with it. Such an analysis can show the effect of each predictor variable while controlling for, or holding constant, the effect of the other variables.

The results of the logistic regression analyses are presented in the form of odd ratios. Odds ratio can be interpreted as the relative likelihood or odds of something happening, as compared to a reference category. For instance, if an odds ratio for male alcohol use was reported as 3.0 (with females serving as the reference category), it would mean that males were three times more likely than females to drink alcohol. Conversely, an odds ratio of 0.5 would mean that males were about half as likely as females to drink alcohol. An odds ratio of 1.0 means that there is no difference between the groups being compared.

Throughout the report, chi-square tests (run on unweighted data) were used to assess the statistical significance of the findings. All comparisons reported are significant at $p \leq .05$, and all percentages shown are weighted unless otherwise noted.

Endnotes

1. Haberman 1994, Gfroerer et al. 1997, CDC 1997.
2. Johnston et al. 1998.
3. Wechsler et al. 1998a.
4. Perkins and Berkowitz 1986.

Hanson and Engs 1992, Presley et al. 1995, Wechsler et al. 1994, cited in Haines 1996.

5 Wechsler 1996.

6 Wechsler et al. 1996.

7 For a complete and detailed description of the methodology, see Dyer et al. 1997. A copy of this report can be obtained from TCADA.

8 Southwest Texas State University was not included in the sample because a list of students was not available.

9 A copy of the survey questionnaire is available by contacting TCADA.

10 The formula for the cooperation rate before screening is [(completes + not qualified) / (completes + not qualified + refusal/terminate)]. The formula for the cooperation rate after screening is [completes/ (completes + refusal/terminate)].

11 Binge drinking was defined differently for women and men in this study because 1) blood alcohol level tables are based on weight and gender; 2) clinical criteria for diagnosing alcohol dependency and alcoholism are sometimes defined differently for women and men; and 3) among students nationwide, women who drink four drinks in a row are just as likely as men who drink five drinks in a row to experience alcohol-related problems (Hetzler and Burnham 1991, Wechsler et al. 1995b). The definition of binge drinking used here is similar to that used by Wechsler et al. (1995b), who defined it as drinking four or five drinks *once* in the last two weeks.

12 One possible problem with the definitions of binge drinking used in this and most other studies is that they derive from a question asking about consuming several drinks "in a row." Some students may interpret "in a row" to include a period of several hours rather than a shorter period of time. Drinking several drinks over a long period may not conform to the popular notion of a "binge" (Dejong 1998).

13 Throughout the report, we use the terms "university" students and "college" students interchangeably to refer to undergraduates, aged 18 to 26, at four-year institutions of higher learning.

14 Darke 1998, Freier et al. 1991, Cooper et al. 1981, Midanik 1983.

Chapter 2. Prevalence of Licit Substance Use and Misuse

TOBACCO

Nearly half (45 percent) of the college students have used tobacco sometime in their lives; 26 percent have used tobacco in the past month. Males, Anglos, and students with the wealthiest parents were the most likely to use tobacco within the past month (Figure 2.1 and Appendix A). Greek-letter fraternity and sorority members (34 percent) were more likely to use tobacco in the past month than non-Greeks (25 percent). There was no significant relationship between past-month tobacco use and class standing (e.g. freshman, sophomore, junior, senior) or current tobacco use and whether a student was under age 21 or aged 21 to 26. Binge drinkers (55 percent) were much more likely than non-binge drinkers (14 percent) to currently use tobacco.

Tobacco users were more likely to smoke cigarettes than use smokeless (chewing) tobacco. Forty-two percent of students have ever smoked cigarettes, and 24 percent have smoked cigarettes in the past month. The percentage of students in Texas who currently smoke cigarettes (24 percent) was less than the percentage of students nationwide who currently smoke (29 percent in 1997).[1] Thirteen percent of college students have ever used smokeless tobacco, and 6 percent have used smokeless tobacco in the past month. Eighty-nine percent of all students who used smokeless tobacco in the past month were Anglo males.

ALCOHOL

Most college students in Texas reported drinking alcohol. They tended to most often drink beer, and then liquor, wine, and wine coolers. Fifty-one percent of all college students drank an alcoholic beverage during the past week, 69 percent drank in the past month, 82 percent drank in the past year, and 88 percent drank an alcoholic beverage at least once during their lifetimes (Table 2.1).

Conversely, nearly one-third of students reported rarely drinking or not drinking at all. Thirty-nine percent of the students who drank within the past month did not binge drink or get drunk often. These figures suggest that 58 percent of all students tended to drink responsibly or rarely.

The bad news is that 60 percent of students younger than age 21 drank in the past month, and a

Figure 2.1. Percentage of College Students Who Used Tobacco in the Past Month by Gender, Race/Ethnicity, and Annual Parental Household Income: Texas, 1997

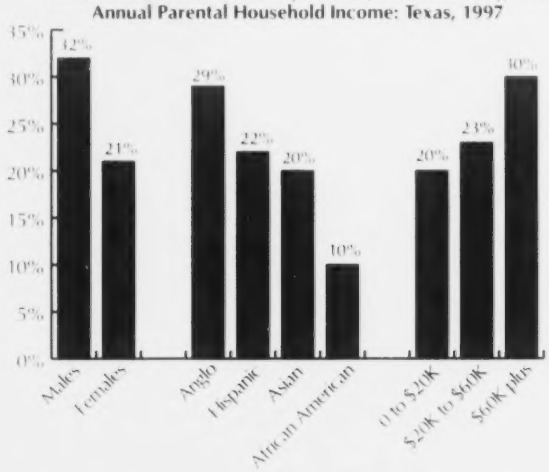


Table 2.1. Percentage of College Students Who Have Drunk Specific Alcoholic Beverages, by Recency of Use: Texas, 1997

	Past-Week Use	Past-Month Use	Past-Year Use	Lifetime Use
Any Alcohol	51.4%	69.3%	81.9%	87.5%
Beer	37.2%	51.5%	63.9%	73.1%
Liquor	27.0%	51.5%	68.4%	76.2%
Wine	15.0%	33.3%	59.2%	70.7%
Wine Coolers	6.5%	20.4%	44.2%	67.3%

Table 2.2. Prevalence of Alcohol Use and Misuse Among College Students, by Selected Demographic Factors: Texas, 1997

	Lifetime Use	Past-Month Use	Binge Drinking	Getting Drunk Often	Alcohol Abuse
All Students	87.5%	69.3%	29.3%	16.3%	15.4%
Gender					
Female	86.6%	66.1%	19.0%	10.4%	10.2%
Male	88.3%	72.5%	39.7%	22.4%	20.7%
Race/Ethnicity					
Anglo	88.4%	71.8%	33.2%	19.6%	17.1%
Hispanic	90.6%	71.7%	26.9%	13.4%	15.3%
Asian	79.3%	54.2%	16.2%	3.9%	8.2%
African American	81.6%	57.0%	11.5%	5.2%	8.5%
Annual Parental Household Income					
0 to $20K	84.0%	57.4%	18.2%	7.8%	10.1%
$20K to $60K	86.7%	65.5%	25.2%	13.8%	12.2%
$60K Plus	89.0%	75.0%	35.5%	20.3%	19.4%
Area Lived in Before Coming to College					
Urban	86.2%	67.9%	26.3%	13.6%	13.8%
Suburban	89.3%	71.2%	30.9%	18.3%	17.7%
Rural	87.0%	68.4%	33.4%	18.5%	14.7%
Age					
Age 18 to 20	82.7%	60.1%	25.2%	13.7%	14.0%
Age 21 to 26	91.9%	77.8%	33.1%	16.9%	16.7%

substantial percentage of all students misused alcohol. Twenty-nine percent of all students binge drank, and 16 percent became drunk on three or more occasions during the past month. At the time of the survey, 15 percent of all college students were abusing alcohol, meaning that they had suffered consequences as a result of drinking on six or more occasions since the beginning of the school year (Table 2.2). Ten percent of all students frequently binge drank, defined as bingeing six or more times within the last month.

Sixty-three percent of binge drinkers considered themselves moderate drinkers, and 29 percent said they were light drinkers.

College students did not consider their bouts of binge drinking or repeated experiences of alcohol-related problems to be the same as heavy or problem drinking. The percentage of students who binge drank (29 percent) and who abused alcohol (15 percent) contrasted with the far lower percentage of students who considered themselves heavy or problem drinkers.[2] Only 3 percent of all students thought they, themselves, were heavy or problem drinkers. When asked to describe their drinking behavior, many students who misused alcohol considered themselves to be moderate or light drinkers. Sixty-three percent of binge drinkers considered themselves moderate drinkers, and 29 percent said they were light drinkers. Similarly, 66 percent of students who were abusing alcohol said they were moderate drinkers, and 19 percent said they were light drinkers.

FACTORS RELATED TO ALCOHOL USE AND MISUSE

Demographic Factors

Women were just as likely as men to have ever used alcohol, and they were only slightly less likely than men to have used it in the past month (Table 2.2 and Appendix A1). However, as Table 2.2 shows, women were much less likely than men to misuse alcohol. Race/ethnicity was associated with both the use and misuse of alcohol. Anglos and Hispanics showed higher percentages than Asians[3] or African Americans of alcohol use and misuse. Annual parental household income was associated with past-month alcohol use and the misuse of alcohol. Students with parents earning over $60,000

BEST COPY AVAILABLE

a year were more likely than students from less wealthy families to drink regularly and to misuse alcohol.

The type of area (urban, suburban, or rural) in which a student lived before coming to college was associated not with alcohol use, but with its misuse (Table 2.2). Students from urban areas were less likely than students from suburbs and rural areas to get drunk often or to binge drink. Students from urban areas were also less likely than students from suburban areas and rural areas to binge drink. However, students from urban areas were just as likely as students from suburban and rural areas to abuse alcohol, which suggests that students from urban areas may suffer negative consequences at lower levels of use. Among students who binge drank, coming from an urban, suburban, or rural environment before starting college was not associated with alcohol abuse.

While younger students were less likely than students 21 or older to drink alcohol, binge drink, or abuse alcohol, they were just as likely as students 21 and older to report that they get drunk often (Table 2.2). The most common way for underage students to obtain alcohol was to get it from someone 21 or older. Table 2.3 shows other ways underage students obtained alcohol. Men were more likely than women to obtain alcohol by using a fake identification or to buy it without being carded.

Lifestyle Factors

The misuse of alcohol is a social activity in college. Of the students who drank five or more drinks in the past month, less than 1 percent were alone when they were drinking, and only 10 percent were with a date or partner. The great majority (90 percent) was with a small or large group of people. Binge drinking and abusing alcohol were also positively associated with a student's number of friends. Table 2.4 shows that students who said they had more than eight friends were more likely to be binge drinkers than those with fewer than eight friends. Binge drinking and abusing alcohol were also positively associated with the number of hours spent socializing with

Table 2.3. Different Ways Underage College Drinkers* Obtained Alcohol in the Past Year: Texas, 1997

From someone 21 or older	90.0%
From someone under 21	32.9%
From a parent or relative at home	25.4%
Bought without getting carded	24.3%
Used personal fake ID	13.2%
From someone else who made it	9.6%

* Includes only students who have drunk alcohol in the past year

Table 2.4. Percentage of College Students Who Binge Drank or Abused Alcohol, by Aspects of Social Life: Texas, 1997

	Binge Drinker*	Alcohol Abuser*
Number of close friends		
Less than 8	23.4%	12.6%
8 or more	35.2%	18.2%
Frequency of socializing with friends		
Less than 2 hours a day	17.7%	7.4%
2 to 4 hours a day	29.9%	15.3%
More than 4 hours a day	43.0%	26.6%
Living with roommate(s)		
No	22.2%	10.6%
Yes	35.3%	19.4%
Importance of participating in parties		
Not at all important	12.7%	4.3%
Somewhat important	29.9%	14.9%
Important	51.7%	30.1%
Very important	65.6%	47.5%
Percentage of friends who have drunk alcohol in the past month		
Less then 90 percent	11.3%	4.5%
90 percent or more	52.4%	29.4%
Percentage of friends who are "heavy" or "problem" drinkers		
Less then 30 percent	26.4%	12.7%
30 percent or more	54.2%	39.1%

* All differences among the categories compared were significant at $p<.05$.

BEST COPY AVAILABLE

Table 2.5. Alcohol Use and Misuse Among College Students, by Membership in a Fraternity or Sorority and Gender: Texas, 1997*

	Total		Female		Male	
	Non-Greek	Greek	Non-Greek	Greek	Non-Greek	Greek
Lifetime Use	86.7%	92.1%	85.9%	90.2%	87.4%	94.3%
Past-Month Use	67.3%	80.2%	64.3%	75.9%	70.4%	85.0%
Getting Drunk Often	14.0%	29.3%	8.3%	21.0%	19.6%	38.8%
Binge Drinking	26.7%	43.7%	16.6%	31.6%	36.8%	57.4%
Alcohol Abuse	13.5%	26.4%	9.0%	16.6%	17.9%	37.6%

*Except for the category of female lifetime use, all differences between Greek and Non-Greek are significant at $p<.05$.

friends; having roommate(s); reporting that partying is very important; having a majority of friends who drank alcohol in the past month; and having a large percentage of friends who are heavy or problem drinkers.

Members of sororities and fraternities were more likely than other students to currently drink and to misuse alcohol (Table 2.5). In general, this was true for both females and males, the exception being that non-Greek women were just as likely as Greek women to have ever drunk alcohol. Cashin et al. (1998) similarly found students in the Greek system across the country averaged significantly more drinks per week, engaged in heavy drinking more often, and with minor exceptions, suffered more negative consequences as a result of drinking than non-Greeks. They also found that fraternity and sorority leaders drank and abused alcohol as often as or more often than other Greek members. The authors suggested that leaders set norms of heavy drinking and used alcohol as a vehicle for social contact and interpersonal connection. The TCADA study supports these findings. Among fraternity and sorority members in Texas, those who reported that participation in Greek life was very important to them were more likely to currently drink alcohol and to misuse alcohol than their Greek peers who rated participation as less important.

Members of sororities and fraternities were more likely than other students to currently drink and to misuse alcohol.

Table 2.6 shows other lifestyle characteristics associated with binge drinking. Students who lived with a spouse/partner or parent/relative, students who watched less than one hour of television per day, and students who slept no more than eight hours per night were less likely to binge drink. Overall, non-athletes were less likely than athletes to binge drink. When females and males were examined separately, however, the difference only existed for males. Students who did volunteer work, students who participated in student organizations, students who said participating in community service or social action was very important, and students who said participating in religion was very important were less likely than other students to binge drink. Students who reported that drinking was a very important part of collegiate life and students who used illicit drugs within the past month were more likely than other students to binge drink. Lifestyle characteristics not associated one way or the other with binge drinking included considering participation in politics or student government to be very important, the number of hours worked per day for wages, and the number of hours per day spent in physical activity (e.g. intramural athletics, jogging, or biking).

Home Brewing Kits

College students who owned home brewing kits for making beer were more likely (73 percent) than other students (35 percent) to binge drink. However, home brewing was not a popular hobby among college students. Only 2 percent of students owned a home-brewing kit, and 24 percent of the

BEST COPY AVAILABLE

Table 2.6. Percentage of College Students with Selected Lifestyle Characteristics Who Binge Drank: Texas, 1997[**]

Lives with spouse/significant other	
No	29.8%
Yes	23.4%
Lives with parents/other relatives	
No	34.3%
Yes	18.4%
Number of hours spent per day watching TV	
Less than 1	25.6%
1 to 2	29.4%
More than 2	33.7%
Number of hours spent per day sleeping	
8 or less	28.5%
More than 8	38.2%
Plays intercollegiate sports	
No	28.5%
Yes	33.5%
Performs volunteer work	
No	32.6%
Yes	22.7%
Participates in student organizations	
No	31.8%
Yes	26.6%
Level of importance for participating in community service or social action	
Low*	30.4%
High	23.5%
Level of importance for participating in religion	
Low*	35.2%
High	16.8%
Level of importance for drinking as part of college experience	
Low*	28.4%
High	75.1%
Use of illicit drug in the past month	
No	22.9%
Yes	69.5%

* "Low" includes considering activity "not at all important," "somewhat important," or "important." "High" is considering activity "very important."

** All relationships between lifestyle variables and binge drinking are significant at $p<.05$.

Table 2.7. Percentage of College Students Who Binge Drank, by Academic Major: Texas, 1997

Agriculture	46.0%
Business	36.4%
Communications	34.8%
Fine Arts	32.1%
Engineering	31.8%
Social Sciences	31.1%
Humanities	23.5%
Mathematics and Biological, Life, Physical, and Computer Sciences	22.7%
Undecided	20.7%
Architecture	20.0%
Education	15.9%

students who owned home brewing kits said they had never used the kit or used it only once. Fifty-five percent made 15 gallons or less per year, which would be the equivalent of about three beers per week. Though many (45 percent) of the students who have kits acquired them before they turned 21, home brewing does not appear to be a popular way for underage students to obtain beer. Only 10 percent of underage students who have drunk alcohol said they obtained alcohol from someone who made it.

Academic Major

Academic major appears to be associated with binge drinking. Table 2.7 lists the percentage of binge drinkers by major in order of greatest percentage. The majors of agriculture and business had the highest percentage of binge drinkers, while education majors had the lowest percentage. Differences among majors may be due to other factors such as age, gender, and area in which a student lived before coming to college that are associated both with choice of major and with binge drinking. For example, students who majored in education were generally female (93 percent), students who were undecided about their major tended to be younger than 21 (74 percent), and students who majored in agriculture tended to be male (61 percent). Agriculture majors also had the highest percentage of students from rural areas (46 percent).

BEST COPY AVAILABLE

Table 2.8. Percentage of College Students Reporting How Their Level of Alcohol Consumption Changed Since Starting College, by Gender and Binge Drinking: Texas, 1997

	Total**	Female	Male	Non-Binge Drinkers	Binge Drinkers
No Change					
No use in HS, no use in college	9.4%	9.0%	9.8%	14.0%	-
Same use in HS and college	19.3%	20.4%	18.2%	20.6%	16.7% *
Increase					
Small increase in college	26.2%	27.2%	25.2%	26.0%	26.6%
Large increase in college	12.4%	11.2%	13.7% *	6.1%	25.0% *
Decrease					
Use in HS, no use in college	3.1%	4.0%	2.1% *	4.3%	-
Small decrease in college	17.2%	15.8%	18.6%	18.0%	15.8%
Large decrease in college	12.4%	12.4%	12.4%	11.0%	15.4% *

* Differences between females and males and non-binge and binge drinkers are significant, $p<.05$.
** Includes only lifetime users of alcohol.
- Less than 0.5 percent

Table 2.9. Percentage of College Students Expressing Agreement on Specific Norms of Alcohol Use on Campus, Texas, 1997

	Strongly Agree	Agree	Disagree	Strongly Disagree
Drinking is an important part of the college experience	2.4%	23.0%	52.4%	21.8%
It is important to show how much you can drink and still hold your liquor	2.1%	17.8%	53.9%	25.1%
You cannot make it here socially without drinking	1.8%	10.2%	59.4%	28.1%

High School Drinking Behavior

Sixty-three percent of all college students have drunk alcohol before reaching the age of 18, and 76 percent have drunk alcohol by age 19. Not all lifetime users of alcohol increased their alcohol consumption after they entered the university. In fact, 33 percent reported a decrease of some kind (Table 2.8). About 39 percent of students who had ever drunk alcohol reported drinking more than they did in high school; 29 percent of students reported no change in consumption. Women and men showed very similar patterns in the ways drinking behavior changed since beginning college. But, men were slightly more likely than women to report a large increase and about half as likely as women to report a decrease from some alcohol use in high school to no use of alcohol in college.

A much higher percentage of binge drinkers than non-binge drinkers reported large increases in drinking since beginning college. However, binge drinkers were also more likely than non-binge drinkers to report a large decrease in alcohol consumption since entering college. Nearly one-third of binge drinkers said their drinking had decreased to some degree since high school. Moreover, among the students who reported drinking about the same amount as in high school, 29 percent were binge drinkers and 14 percent were abusing alcohol. Likewise, college students who reported drinking several times a month or every day in high school were more likely than students who drank less frequently in high school to binge drink in college. Students who binge drank during their last year in high school were much more likely (61 percent) than students who did not binge drink during their last year in high school (19

BEST COPY AVAILABLE

percent) to be binge drinkers in college. These findings show many students had already established a pattern of misuse before coming to college.

Perceptions of Peer Alcohol Use

The majority of students in Texas downplayed the social pressures to drink. Many students rejected the notion that drinking is an important part of the college experience either for themselves or their peers. Seventy-nine percent of students disagreed with the statement, "It's important to show you can hold your liquor." Eighty-eight percent of students disagreed with the statement, "You can't make it socially here without drinking" (Table 2.9). Moreover, many students felt that positive social reinforcement exists for non-drinkers. Forty-seven percent agreed with the statement, "Students here admire non-drinkers."

Research suggests that misconceptions about the prevalence and normality of heavy drinking can lead students to have more permissive attitudes toward the misuse of alcohol and can lead to more drinking.[4] The misuse of alcohol may become more widespread as some students drink at higher levels because they incorrectly believe that such behavior conforms to that of their peers.

The present study examined whether college students in Texas did indeed overestimate the prevalence of drinking and problem drinking among peers and whether these misconceptions were related to their own misuse of alcohol. Students were asked to estimate the percentage of all students on their campuses who drank alcohol in the past month. The actual percentage of students who drank alcohol in the past month at each university ranged from a low of 53 percent to a high of 79 percent.[5] Table 2.10 shows that respondents at each university tended to overestimate these percentages, since the average of their estimates of past-month alcohol use at each university was greater than the actual percentage of reported behavior. In general, binge drinkers overestimated the percentage of current drinkers on their campuses to a greater degree than non-binge drinkers.

Respondents were also asked to estimate the percentage of students on their campuses who were heavy or problem drinkers. Students also tended to overestimate the percent-

Table 2.10. Comparing Mean College Student Estimates of Past-Month Alcohol Use to Percentages of Reported Behavior: Texas, 1997

School Code	Actual Percentage of Past-Month Drinkers*	Student Estimates of Past-Month Alcohol Use at Their Campuses		
		All Students	*Non-Binge Drinkers*	*Binge Drinkers*
A	78.5%	81.8%	79.4%	85.3%
B	75.7%	81.2%	80.2%	84.3%
C	75.5%	80.8%	78.4%	86.4%
D	75.2%	77.3%	77.4%	77.3%
E	69.9%	73.9%	73.2%	76.0%
F	67.2%	82.1%	81.6%	83.4%
G	61.9%	73.5%	72.3%	78.2%
H	59.6%	69.2%	68.7%	70.9%
I	58.5%	73.1%	72.1%	76.6%
J	53.1%	79.0%	76.5%	87.2%

*Based on survey respondents' reports of their own alcohol use.

Table 2.10. Comparing Mean College Student Estimates of Past-Month Alcohol Use to Percentages of Reported Behavior: Texas, 1997

School Code	Actual Percentage of Past-Month Drinkers*	Student Estimates of Past-Month Alcohol Use at Their Campuses		
		All Students	*Non-Binge Drinkers*	*Binge Drinkers*
A	78.5%	81.8%	79.4%	85.3%
B	75.7%	81.2%	80.2%	84.3%
C	75.5%	80.8%	78.4%	86.4%
D	75.2%	77.3%	77.4%	77.3%
E	69.9%	73.9%	73.2%	76.0%
F	67.2%	82.1%	81.6%	83.4%
G	61.9%	73.5%	72.3%	78.2%
H	59.6%	69.2%	68.7%	70.9%
I	58.5%	73.1%	72.1%	76.6%
J	53.1%	79.0%	76.5%	87.2%

*Based on survey respondents' reports of their own alcohol use.

BEST COPY AVAILABLE

These findings suggest that perceptions of peer norms contribute to the misuse of alcohol as students behave according to what they perceive to be the expectations of their peers.

age of heavy or problem drinkers at their universities. Table 2.11 shows that, at the majority of schools, the alcohol abusers overestimated the percentage of heavy or problem drinking to a greater degree than non-abusers. These findings support other studies suggesting that perceptions of peer norms, regardless of the actual campus norm, contribute to the misuse of alcohol as students behave according to what they perceive to be the expectations of their peers.[6]

Multivariate Analysis: Factors Most Strongly Associated with Binge Drinking

Table 2.12 shows the factors most likely to predict binge drinking when all other factors considered are held constant.[7] Unlike the cross tabulations shown in previous tables, logistic regression can show which factors are still significantly associated with binge drinking when controlling for other factors. The variables in this analysis are those which were related to binge drinking at the bivariate level. The demographic characteristics most likely to be associated with high risk for binge drinking were being male, being age 21 to 26, being Anglo or Hispanic, and having parents who earn more than $60,000 yearly. Several lifestyle characteristics, such as belonging to a fraternity or sorority, endorsing the importance of drinking as a part of the college experience, receiving low grades, and being a binge drinker in high school, also greatly elevated the risk for binge drinking in college. Conversely, considering religious activities to be very important, living with a spouse/significant other or parents/relatives, and earning A's decreased the likelihood of being a binge drinker when all other factors were held constant. There was no association

Table 2.12. Estimated Odds Ratios for Logistic Regression Model of Binge Drinking on Selected Variables: Texas, 1997**

	Odds Ratio
Gender	
(Female is reference)	
Male	2.3 *
Age	
(Age 18 to 20 is reference)	
Age 21 to 26	1.5 *
Race/Ethnicity	
(Anglo is reference)	
Hispanic	0.9
Asian	0.6 *
African American	0.4 *
Annual Parental Household Income	
(Over 60K is reference)	
$0 to $20K	0.5 *
$20K to $60K	0.8 *
Type of Area Lived in Before College	
(City is reference)	
Suburb	1.1
Rural	1.2
Living Arrangements	
(Not living in these arrangements is reference)	
Lives with spouse/significant other	0.4 *
Lives with parents/other relatives	0.4 *
GPA	
(B is reference)	
A	0.8 *
C+ to C	1.6 *
C- to F	3.1 *
Other Variables	
(The opposite of each variable is reference)	
Fraternity/sorority member	1.9 *
Participation in religion is very important	0.4 *
Believes drinking is a very important part of the college experience	4.6 *
Binge drinker during last year of high school	5.1 *

* Chi-square significant at $p <= .05$

** n=2,420; DF=18

BEST COPY AVAILABLE

when controlling for other factors between binge drinking and participation in intercollegiate athletics or considering participation in community service or social action to be very important. There was also no association between binge drinking and the type of geographic area in which the student lived before college.

The predictors for binge drinking among college students in Texas were similar to the predictors for binge drinking among students nationwide. Among college students nationwide, being Anglo, male, non-religious, and single; being involved in athletics; living in a sorority or fraternity; and being a binge drinker in high school increased the likelihood for binge drinking in college.*

Reasons Students Did Not Drink Alcohol

Policy makers and administrators can benefit from knowing why students do not drink or why students decide to limit their drinking. Table 2.13 shows the reasons given for abstaining among students who did not drink alcohol in the past year. Very large percentages of students said they did not drink because it is bad for their health, it is against their values, they do not want to lose control, and because alcohol interferes with studying. These appeared to be the most important reasons for abstaining, and thus should be emphasized in prevention and intervention programs. Substantial percentages of students said religious beliefs, the taste of alcohol, someone else's disappointment, interference with athletic activities, and non-drinking friends carried some importance in their decision not to drink. Having relatives with drinking problems, believing alcohol is fattening, and having had personal drinking problems appeared to be less important reasons for abstaining from alcohol. The importance given to reasons for abstaining were remarkably similar for underage students aged 18 to 20 and students aged 21 to 26.

This study showed that 43 percent of students who did not drink in the past year said the cost of alcohol had some importance in their decision to abstain (Table

Table 2.13. Reasons for Not Drinking Given by College Students Who Abstain: Texas, 1997*

	Students		
	Total	Age 18-20	Age 21-26
It is bad for my health	91.2%	92.0%	89.9%
Drinking is against my values	89.8%	92.0%	86.5%
I do not want to lose control	88.0%	90.6%	84.0%
It interferes with my studying	80.5%	82.7%	77.2%
Drinking is against my religion	65.2%	64.8%	65.8%
I do not want to disappoint someone I care about	61.3%	66.2%	53.5%
I do not like the taste of alcohol	59.2%	57.2%	62.4%
It interferes with my athletic activities	56.8%	57.1%	56.1%
My friends do not drink	54.3%	53.1%	56.1%
I am not old enough to drink legally	49.5%	67.8%	N/A
It costs too much money	43.1%	46.7%	39.0%
My family has had problems with alcohol	35.5%	35.6%	35.4%
It is fattening	35.2%	34.6%	36.1%
I have had problems with alcohol	9.8%	8.3%	12.3%

* Percentages represent combined responses of "somewhat important," "important," or "very important."

Table 2.14. Reasons for Limiting Drinking or Not Drinking Given by Past-Year College Drinkers: Texas, 1997**

	Students		
	Total	Age 18-20	Age 21-26
I'm going to drive	96.4%	96.3%	96.5%
It interferes with my studying	88.2%	88.3%	88.0%
I'm short on money	76.9%	74.2%	79.1% *
I'm going on a date	70.6%	75.0%	66.8% *
I've decided to cut down	60.7%	63.9%	58.2% *
I recently drank too much	47.2%	48.4%	46.0%
I'm afraid of getting caught	43.7%	56.6%	23.1% *
It is fattening	35.4%	34.8%	35.2%
It interferes with athletics	35.3%	38.3%	34.9%
I have had problems with alcohol	24.2%	25.1%	23.5%

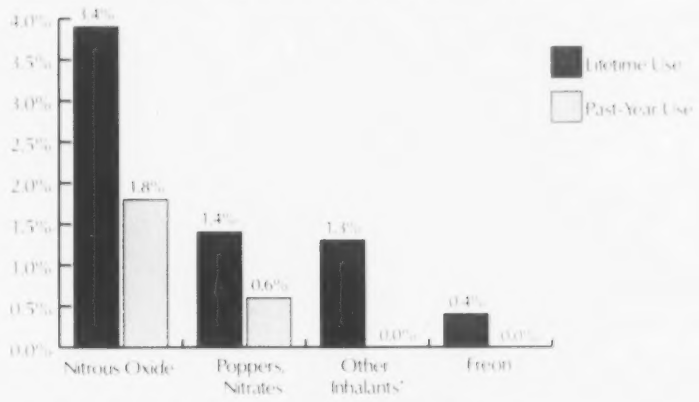
* Differences between younger and older students are significant at $p<.05$.

** Percentages represent combined responses of "somewhat important," "important," or "very important."

BEST COPY AVAILABLE

Intention to drive was by far the most important reason for many students who decided to limit their drinking.

Figure 2.2. Percentage of College Students Who Used Specific Inhalants, by Recency of Use: Texas, 1997



*Other Inhalants include spray paint, glue, solvents, and gas.

2.13). The First (1987) and Second (1988) National Health and Nutrition Examination Surveys similarly found higher beer taxes significantly reduced the frequency of drinking among people aged 16 to 21. Likewise, another study found heavy drinking among people of all ages decreased as the prices of alcoholic beverages increased. This same study also found heavy drinking by younger people was more sensitive to price than was heavy drinking by adults, and heavy drinking by young women was much more sensitive to price than heavy drinking by young men.[9]

Table 2.14 shows the reasons given for limiting drinking or choosing not to drink in particular situations among students who drank some alcohol in the past year. Intention to drive was by far the most important reason for many students who decided to limit their drinking. A large percentage of students also said interference with studying carried some importance when they decided to limit their drinking. Seventy-seven percent said concern for finances had some importance in their decision to limit their drinking or not drink at all. Although it was the least prevalent reason cited, nearly one-quarter of students who drank in the past year had limited their drinking because they had had problems with alcohol.

Older students were more likely than younger students to say being short on money was a reason to limit their drinking or not drink at all. Underage students (aged 18 to 20) were more likely than students aged 21 to 26 to say going on a date, deciding to cut down, and being afraid of getting caught were important reasons.

INHALANTS

The term *inhalants* refers to a wide variety of volatile substances (e.g., gasoline, glue, and paint), anesthetics, nitrates, gasses, and aerosols that people sniff, inhale, or huff (inhale through the mouth) to attain states of euphoria, intoxication, or sexual arousal. Inhalants are not in themselves illegal, since most products have legitimate uses in homes and businesses. However, these substances are harmful when inhaled. About 5 percent of college students in Texas reported using inhalants at least once in their lifetimes, and 1 percent reported using them during the past month. Men (8 percent) were more likely than women (4 percent) to report ever using inhalants. Anglos were more likely to use inhalants than other ethnic or racial groups. Binge drinkers (11 percent) were nearly four times as likely as non-binge drinkers (3 percent) to have ever used inhalants. Nitrous oxide was the most common inhalant used by college students (Figure 2.2).

Endnotes

1. Wechsler et al. 1998b.
2. "Light," "moderate," "heavy," and "problem" drinking are subjective measures. They were not explicitly defined in the survey instrument. Rather, students were asked to choose the label that best described their drinking behaviors.
3. *Asians* refer to Asians, Pacific Islanders, and Indians.
4. Haines 1996, Perkins 1991, Perkins 1995, Perkins and Berkowitz 1986, Perkins and Wechsler 1996.

BEST COPY AVAILABLE

These percentages are based on the numbers of students at each school who reported their own past-month alcohol use in the survey.

Perkins et al. 1998.

The odds ratio shown in Table 2.12 represent the relative likelihood of binge drinking for individuals in each demographic or lifestyle category, as compared to individuals in the "reference" category. To interpret Table 2.12, it is useful to know that odds ratios take only positive values, have no upper limit, and equal one when no relationship exists. Odds ratios greater than1.0 indicate positive covariation between variables, while odds ratios less than 1.0 indicate an inverse relationship. For example, Table 2.12 shows that when all other factors are held constant, males were over two times as likely as females to be binge drinkers. African Americans were about half as likely as Anglos (the reference category) to be binge drinkers when controlling for all other factors.

Cashin et al. 1998, Wechsler et al. 1995c, Wechsler et al. 1995a, 1998a.

Kenkel 1993, cited in Chaloupka 1996.

Chapter 3. Prevalence of Illicit Substance Use and Misuse

Illicit drug use refers to the non-medical use of marijuana or hashish, crack or powder cocaine, uppers, downers, heroin and other opiates, psychedelics, club drugs, and steroids. Illicit drug use is much less common than the use of alcohol among college students in Texas. Twenty-three percent of all students used an illicit drug in the past year, and 14 percent used an illicit drug in the past month.

Students who used illicit drugs were likely to also drink alcohol. Ninety-nine percent of past-year illicit drug users drank alcohol within the past year. Conversely, 17 percent of past-year alcohol users used an illicit drug in the past year. Appendix A shows the prevalence and recency of use of each drug asked about in the survey.

Many college students who have ever used an inhalant or illicit drug (44 percent) reported no change in their drug use since beginning college (Table 3.1). Among the 14 percent of students who reported they used drugs at the same level in college as they did in high school, 66 percent used illicit drugs within the past month, and 13 percent were abusing drugs, meaning they had experienced six or more negative consequences as a result of using drugs since the beginning of the school year. Students whose drug use patterns have changed since beginning college were over twice as likely to report a decrease in drug use (68 percent) as an increase (32 percent). Women were more likely than men to report no use in high school or college or a decrease from some drug use in high school to no drug use in college. Men were more likely to report a small decrease in drug use.

The patterns of change in substance use since beginning college differed for alcohol and drugs. A much larger percentage of students reported no change with regard to drug use than with regard to alcohol consumption. While college students were much more likely to report a decrease in drug use, they were more likely to report an increase in the use of alcohol rather than a decrease (refer to Table 2.8).

Twenty-three percent of all students used an illicit drug in the past year, and 14 percent used an illicit drug in the past month.

The percentage of students who had used an illicit drug in the past month differed by academic major (Table 3.2). Twenty-five percent of fine arts majors have used an illicit drug in the past month. Education and agriculture majors, on the other hand, had the lowest prevalence of current illicit drug use.

The majors of those students who were binge drinkers were not necessarily those of current illicit drug users and vice versa. For instance, students who were fine arts majors had a high prevalence of current illicit drug use but a

Table 3.1. Percentage of College Students Reporting How Drug Use Changed Since Beginning College, by Gender: Texas, 1997**

	Total	Female	Male
No Change			
No use in HS, no use in college	30.3%	33.6%	27.6% *
Same use in HS and college	13.9%	12.4%	15.3%
Increase			
Small increase in college	13.5%	12.4%	14.3%
Large increase in college	4.3%	3.4%	5.0%
Decrease			
Use in HS, no use in college	16.4%	20.4%	13.4% *
Small decrease in college	14.4%	11.4%	16.7% *
Large decrease in college	7.3%	6.8%	7.7%

* Differences between females and males are significant, $p < .05$.

** Includes only lifetime users of inhalants and illicit drugs.

BEST COPY AVAILABLE

relatively low percentage of binge drinkers. Conversely, agriculture majors had a high prevalence of binge drinking and a relatively low prevalence of current illicit drug use. Business majors had high prevalence of both binge drinking and current illicit drug use. Students majoring in education were less likely than other students to either binge drink or currently use illicit drugs (compare Table 2.7 and Table 3.2).

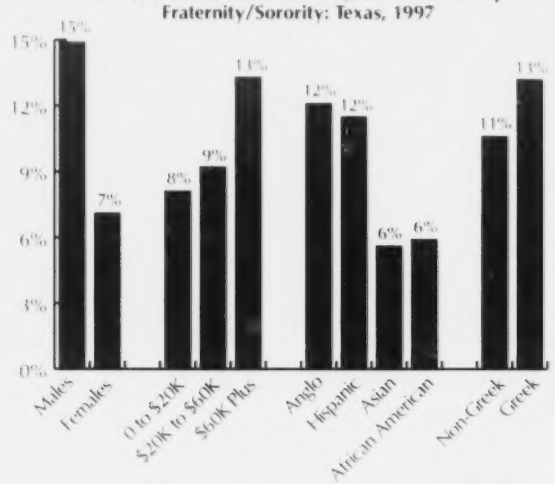
Table 3.2. Percentage of Past-Month Illicit Drug Users, by Academic Major: Texas, 1997

	Past-Month Illicit Drug Use
Fine Arts	25.3%
Business	17.2%
Communications	17.2%
Humanities	17.0%
Social Sciences	14.5%
Undecided	14.3%
Architecture	14.1%
Engineering	11.8%
Mathematics and Biological, Physical, and Computer Sciences	9.5%
Education	6.4%
Agriculture	5.7%

MARIJUANA

Of all illicit drugs, marijuana was the most popular among drug users. Twenty-nine percent of all students have used marijuana during their lifetimes; 11 percent of students have used it during the past month. Males were twice as likely as females to currently smoke marijuana. Anglos and Hispanics were about twice as likely as Asians and African Americans to smoke marijuana in the past month. Students coming from the wealthiest households were more likely than students from less wealthy households to currently smoke marijuana. Unlike for alcohol use, non-Greek students were just as likely as fraternity and sorority members to currently use marijuana (Figure 3.1).

Figure 3.1. Percentage of College Students Who Used Marijuana in the Past Month, by Gender, Annual Parental Household Income, Race/Ethnicity, and Membership in a Fraternity/Sorority: Texas, 1997



COCAINE/CRACK

Compared to marijuana, the use of cocaine and crack was relatively rare among college students. Five percent of college students reported using powder cocaine at least once during their lifetimes, and 1 percent of students reported using powder cocaine in the past month. Men (3 percent) were slightly more likely than women (1 percent) to have used powder cocaine in the past month. Anglos, Hispanics, Asians, and African Americans were equally likely to have used it in the past month (1 percent). Although students whose parents earned more than $60,000 per year were more likely than less wealthy students to ever use powder cocaine, there was no difference in past-month use between the wealthy and the less wealthy. Less than 2 percent of students reported ever using crack cocaine, and less than 0.5 percent have used crack cocaine in the past month. Women were just as likely as men to report ever using crack. Past-month use of crack cocaine was too low to discern any demographic differences.

UPPERS

The use of *uppers* in this report refers to the non-medical use of stimulants, such as methamphetamines and amphetamines (diet

BEST COPY AVAILABLE

pills, speed, or uppers), ephedrine-based substances (natural MDMA or natural ecstasy), and Ritalin (methylphenidate). Ten percent of all students reported ever using uppers; only 2 percent of students have used them in the past month. Men (3 percent) were more likely than women (1 percent) to use uppers in the past month. Hispanic students (4 percent) reported higher percentages of using uppers during the past month compared to Anglo students (2 percent), African Americans (2 percent), and Asians (1 percent). Students from the wealthiest families were more likely than students from less wealthy families to have used uppers at least once in their lifetimes. However, less wealthy students were just as likely as the wealthiest students to have used uppers in the past month. Ritalin was slightly less popular among college students than other uppers (Table 3.3).

DOWNERS

The use of *downers* refers to the non-medical use of barbiturates, such as Quaaludes or yellow jackets, and tranquilizers, such as Valium (diazepam) or Librium (chlordiazepoxide), Rohypnol (flunitrazepam), and Klonapin (clonazepam). Mexican pharmacists are now pushing clonazepam, known as Rivotril in Mexico, since Rohypnol can no longer be legally imported.[1] Besides being known as "date rape drugs," Rohypnol and Klonapin produce states of intoxication, especially when consumed with alcohol. Only 6 percent of students reported ever using downers; only 2 percent of students have used downers in the past month. Females (1 percent) were just as likely as males (2 percent) to use downers in the past month. Anglo (2 percent) and Hispanic students (2 percent) were more likely than Asians and African Americans (less than 1 percent) to use them in the past month. Valium and Librium were the most popular kinds of downers among college students (Table 3.3).

HEROIN AND OTHER OPIATES

Heroin use was nearly nonexistent in the student population. Less than 1 percent of the students reported ever using heroin in their lifetimes. College students were more likely to have used *other opiates*, such as codeine, demerol, and percodan. Still, only 8 percent of students reported ever using these opiates; 2 percent of students have used other opiates during the past month. Again males (3 percent) were more likely than females (1 percent) to have used other opiates in the past month. Students from less wealthy families were just as likely as students from higher income families to have used other opiates in the past month. Racial/ethnic groups showed similar low percentages of past-month use of other opiates (see Appendix A, Table A2). Codeine cough syrup, demerol, and percodan were the most popular kinds of other opiates used among college students (Table 3.3).

Ten percent of all students reported ever using uppers; only 2 percent of students have used them in the past month.

PSYCHEDELICS

The psychedelics or hallucinogens asked about in this study included LSD, psilocybin mush-

Table 3.3. Percentage of College Students Who Used Specific Uppers, Downers, and Opiates: Texas, 1997

	Lifetime Use	Past-Year Use
Uppers		
Methamphetamines and Amphetamines	6.1%	2.6%
Ephedrine-Based Substances	5.6%	2.6%
Ritalin	2.0%	1.5%
Downers		
Tranquilizers, such as Valium or Librium	4.1%	2.8%
Rohypnol (flunitrazepam)	2.6%	1.3%
Jackets	2.5%	1.2%
Klonapin (clonazepam)	0.1%	0.1%
Opiates		
Codeine Cough Syrup, Demerol, or Percodan	5.0%	3.7%
Codeine	4.5%	2.8%
Heroin	0.6%	0.3%

BEST COPY AVAILABLE

rooms, mescaline, and PCP (phencyclidine). Twelve percent of students reported ever using psychedelics, and 3 percent of students reported use during the past month. Males (4 percent) were more likely than females (2 percent) to use psychedelics in the past month. Anglo (3 percent), Hispanic (3 percent), and Asian students (3 percent) showed higher percentages of past-month psychedelic use than African Americans (1 percent). Though students from wealthier families (14 percent) were more likely than students from less wealthy families (10 percent) to ever use psychedelics, family income was not significantly associated with past-month use. College students were more likely to use psychedelics such as mushrooms, mescaline, or PCP in the past year than LSD (Table 3.4).

CLUB DRUGS

Club drugs are drugs primarily used by youth and young adults in night club or party settings. The club drugs asked about in this study included Ecstasy (MDMA), Ketamine (Special K), GHB (gamma hydroxybutyrate, Fantasy), and Nexus (2-CB, bromo, or toonies). Eight percent of students reported using these drugs in their

Twelve percent of students reported ever using psychedelics, and 3 percent of students reported use during the past month.

Table 3.4. Percentage of College Students Who Used Specific Psychedelics and Club Drugs: Texas, 1997

	Lifetime Use	Past-Year Use
Psychedelics		
Other Psychedelics Like Mushrooms, Mescaline, or PCP	9.2%	5.1%
LSD	9.1%	3.6%
Club Drugs		
Ecstasy (MDMA)	7.4%	2.9%
GHB (gammahydroxybutyrate)	1.0%	0.9%
Ketamine (Special K)	0.1%	0.1%
Nexus (2-CB, Toonies)	0.1%	0.0%

Table 3.5. Estimated Odds Ratios for Logistic Regression Model of Illicit Drug Use in the Past Month on Selected Variables: Texas, 1997"

	Odds Ratio
Gender	
(Female is reference)	
Male	1.5 *
Age	
(Age 18 to 20 is reference)	
Age 21 to 26	0.8
Race/Ethnicity	
(Anglo is reference)	
Hispanic	1.2
Asian	0.9
African American	0.9
Annual Parental Household Income	
(Over 60K is reference)	
$0 to $20K	0.8
$20K to $60K	0.9
Type of Area Lived in Before College	
(City is reference)	
Suburb	0.9
Rural	0.6 *
Living Arrangements	
(Not living in these arrangements is reference)	
Lives with spouse/significant other	1.4
Lives with parents/other relatives	0.7 *
GPA	
(B is reference)	
A	1.0
C+ to C	1.1
C- to F	1.0
Other Variables	
(The opposite of each variable is reference)	
Fraternity/Sorority member	1.1
Participates in student organizations	0.7 *
Participation in arts, music, drama is very important	2.7 *
Participation in religion is very important	0.8 *
Binge drinker during last year of high school	2.7 *
Binge drinker in college	4.5 *

* Chi-square significant at p <= .05

" n=2,420, DF=19

BEST COPY AVAILABLE

Living with parents or other relatives, participating in student organizations, and considering religious activities to be very important decreased the risk for current illicit drug use.

lifetimes; 1 percent of students have used club drugs in the past month. Ecstasy (MDMA) was the most popular club drug among college students (Table 3.4).

STEROIDS

The use of anabolic steroids was relatively rare among college students. Less than 1 percent of students reported using steroids in their lifetimes. Only 0.1 percent of students reported using steroids in the past month. Among the students who reported ever using steroids, 87 percent were male.

MULTIVARIATE ANALYSIS: FACTORS MOST STRONGLY ASSOCIATED WITH ILLICIT DRUG USE

Table 3.5 shows the factors most likely to predict current illicit drug use when other factors are held constant. Logistic regression suggested demographic factors played a more modest role in predicting current illicit drug use, as compared to binge drinking. However, being male did increase the risk for current illicit drug use as it had for binge drinking, and though type of area in which a student lived before beginning college had not been significantly associated with binge drinking in the logistic regression, being from a rural area decreased the likelihood for current illicit drug use. While living with a spouse or significant other had decreased the likelihood for binge drinking, there was no association between current illicit drug use and living with a spouse or significant other.

Logistic regression showed that, when controlling for other factors, the most significant predictors for current illicit drug use were having been a binge drinker in high school, being a binge drinker in college, and considering participation in the arts, music, and drama to be very important. Living with parents or other relatives, participating in student organizations, and considering religious activities to be very important decreased the risk for current illicit drug use. When other factors were held constant, parental household income, race/ethnicity, grade point average, and membership in a fraternity/sorority were not significantly associated with current illicit drug use.

Endnote

[1] Maxwell 1998.

BEST COPY AVAILABLE

Chapter 4. Comparison to College Students Nationwide

One goal of this study was to compare the behaviors of students in Texas to the behaviors of students nationwide. The findings of Wechsler (1996) and Wechsler et al. (1994, 1995a, 1996, 1998a) were used to compare the behaviors of college students at the national level to those living in Texas. Wechsler collected and analyzed data on substance use among college students across the nation using a questionnaire that served as the basis for the Texas survey. Though the findings of the two surveys are generally comparable, some caution should be used when interpreting the results since some differences in sampling design, data collection, and analytical protocols between the two studies exist.[1]

Despite the methodological differences between the two surveys, the findings on past-year and past-month substance use are remarkably similar, with the exception of marijuana (Table 4.1), where the percentage of past-year users in Texas was lower than the percentage of past-year users nationwide. College students in Texas also tended to binge drink less than students nationwide. The percentage of binge drinkers on campuses nationwide was 44 percent, compared to 29 percent of binge drinkers on Texas campuses. Fifty percent of men and 39 percent of women nationwide were binge drinkers.[2] In Texas, 40 percent of men and 19 percent of women were binge drinkers (Figure 4.1).

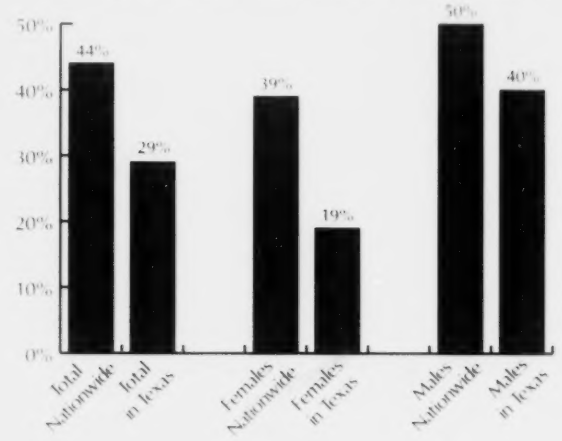
The percentage of marijuana users and binge drinkers in Texas were lower than the percentage of marijuana users and binge drinkers nationwide.

Table 4.1. Percentage of College Students Who Used Substances in Texas (1997) and Nationwide (1993)*

	Past-Year Use		Past-Month Use	
	Texas	Nationwide	Texas	Nationwide
Alcohol	82%	84%	69%	70%
Cigarettes	32%	32%	24%	22%
Marijuana	18%	24%	11%	13%
Chewing Tobacco	8%	8%	6%	5%
LSD	4%	4%	1%	-
Cocaine	3%	2%	1%	-

* Sources: *1997 Texas Survey of Substance Use Among University Students*, and the national College Alcohol Study, 1993 (Wechsler 1996).
- Percentages not available.

Figure 4.1. Percentage of College Students Who Binge Drank in Texas (1997) and Nationwide (1993), by Gender



Endnotes

1. Wechsler et al. 1995c mailed surveys and offered possible cash rewards for their timely return, and as discussed previously, they

BEST COPY AVAILABLE

defined binge drinking as one binge within the past two weeks. In the present survey, college students were interviewed by telephone, and binge drinking was defined as two binges within the past month.

[2] Wechsler et al. 1994.

Chapter 5. Other Risky Behavior Associated with Substance Misuse

GAMBLING AND PROBLEM GAMBLING

Despite popular media coverage on game-fixing scandals and bookmaking rings that have flourished at some universities,[1] there have been relatively few scientific surveys of the prevalence of gambling and problem gambling among college students.[2] But, as Winters (1998) pointed out, the college years may present a heightened risk for developing gambling problems because this period is associated with other risky behaviors, such as heavy alcohol use, and because the age at which gambling becomes legal is 18 in many states. Other factors that place college students at particular risk include easy access to internet gambling,[3] as well as their close proximity to sporting events which provide numerous opportunities for wagering.[4] College students may also be particularly vulnerable to quickly developing debt because of high college costs, student loans, and low income while in school.[5]

To explore the prevalence of gambling and problem gambling among university students in Texas, as well as its association with substance use and misuse, a series of questions on gambling behavior was included in the present survey. Respondents were asked whether they had participated in each of nine specific gambling activities during the past year, whether they had bet regularly (at least weekly) on them, and whether they had experienced any gambling-related problems during that year.

Prevalence of Gambling Among College Students

Some 68 percent of Texas college students said they have placed a bet for money within the past year (Table 5.1). This percentage was nearly identical to that of adults (68 percent) and teenagers (67 percent) in the general population of Texas.[6] College students bet on a variety of activities, with the lottery being the most popular activity. About half of those who bet on the lottery were lottery players only, while the other half bet on other gambling activities as well as the lottery. Those other gambling activities included betting on sports or other events with friends or coworkers; betting on cards, dice or board games with friends or family; and betting on slot or video poker machines. About 13 percent of students said

Some 68 percent of Texas college students said they have placed a bet for money within the past year. This percentage was nearly identical to that of adults (68 percent) and teenagers (67 percent) in the general population.

Table 5.1. Percentage of Texas College Students (1997) and All Adults Statewide (1995) Who Bet in the Past Year on Specific Gambling Activities

	College Students	All Adults*
Any gambling activity	**68%**	**68%**
Texas Lottery	54%	59%
Sports or other events *with friends or co-workers*	22%	22%
Card/dice/board games *with family or friends*	19%	13%
Slot machines or videopoker machines	17%	19%
Card/dice games at a casino	13%	13%
Horse or greyhound racing	7%	10%
Bingo	6%	10%
Sports through a bookie	4%	2%
Card parlor or card shack *with strangers*	2%	1%
Other (non-specified)	4%	0%

*Data are from *Gambling in Texas: 1995 Surveys of Adults and Adolescent Gambling Behavior* and represent adults statewide aged 18 and older.

BEST COPY AVAILABLE

Figure 5.1. Percentage of Texas College Students (1997) and Adults Statewide (1995) Who Bet on Lottery and Non-Lottery Activities in the Past Year

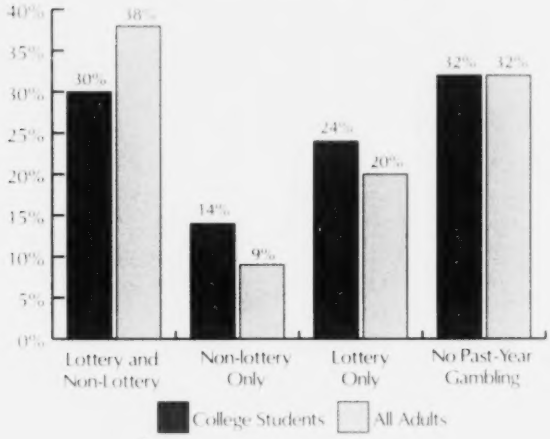
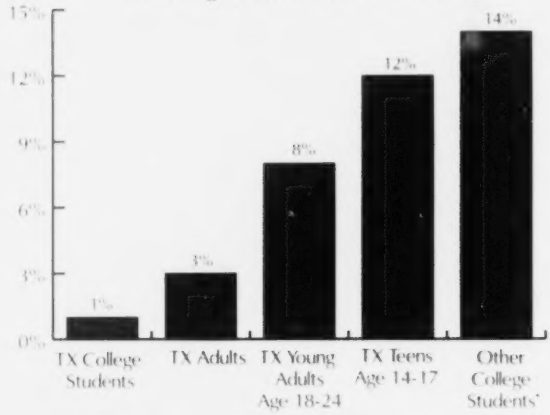


Figure 5.2. Percentage of Problem/Pathological Gamblers Among Texas College Students (1997), Texas Adults and Young Adults (1995), Texas Teens (1995), and College Students from Other Studies



*The term *other college students* refers to an average derived from a meta-analysis of other gambling studies among college students nationwide (Shaffer, Hall, and Vanderbilt 1997).

they have bet in casinos during the past year.

The percentages who bet on these activities were similar to those reported by all adults statewide (Table 5.1).[7] Figure 5.1 presents a summary picture of the percentages of students and of adults in the general population who bet on the lottery and on non-lottery activities in the past year.

Frequency of Betting

Most students bet only occasionally within the past year. Only about 5 percent of all students (7 percent of bettors) bet on any activity weekly or more often for any period of at least several weeks. These "regular" gambling activities were most likely to be either the Texas lottery or sports betting with friends.

Only about 5 percent of all students (7 percent of bettors) bet on any activity on a regular basis.

Problem Gambling

A measure of problem gambling among college students was obtained by asking a series of questions derived from the South Oaks Gambling Screen (SOGS), a reliable and validated instrument widely used in research and clinical settings to identify problem or compulsive gamblers. Respondents were asked 12 out of the original 20 questions of the SOGS (omitted were some that were not relevant to college students), plus three supplementary questions about problem gambling (see Appendix B). Following the usual scoring of the SOGS, students who reported having experienced five or more of these problems were considered to be *pathological* (compulsive) *gamblers*, while students who reported three or four problems were considered to be *problem gamblers*. These problem-related questions were asked only of the 5 percent of students who were regular (at least weekly) gamblers during the past year.[8]

Figure 5.2 shows the percentage of problem/compulsive gamblers among college students in Texas and compares it with percentages among other populations. Among all students, only 0.3 percent scored as pathological gamblers, and only 0.7 percent more scored as problem gamblers, meaning that a total of about 1 percent of college students could be considered problem or pathological gamblers.

These percentages were significantly lower than those found among teens and adults interviewed as part of the 1995 Texas surveys of gambling behavior,[9] which found combined percentages of problem and pathological gambling to be 12 percent for teens aged 14 through 17, almost 8

BEST COPY AVAILABLE

percent for young adults aged 18 through 24, and 3 percent for adults overall. The percentages found in the Texas college survey were also much lower than percentages found in other studies of college students outside Texas,[10] although almost all of these other studies reported only lifetime percentages of problem gambling, which would be naturally higher than past-year percentages. It is likely that the percentages reported in the Texas college survey were substantially underestimated.[11]

Factors Related to Gambling and Problem Gambling

Male students and fraternity/sorority members were the most likely to gamble as well as to have problems if they had gambled. Students who said participation in athletics was important to them were also more likely to gamble and to have gambling problems if they did gamble.[12] Gambling and problem gambling were also significantly associated with binge drinking and alcohol abuse (although the misuse of alcohol did not necessarily take place at the same time as the gambling). For instance, while problem/pathological gamblers represented about 1 percent of all students who gambled in the past year, they represented 3 percent of binge drinkers who gambled, 6 percent of students who could be considered alcohol abusers, and 9 percent of students who described themselves as heavy or problem drinkers (Figure 5.3).

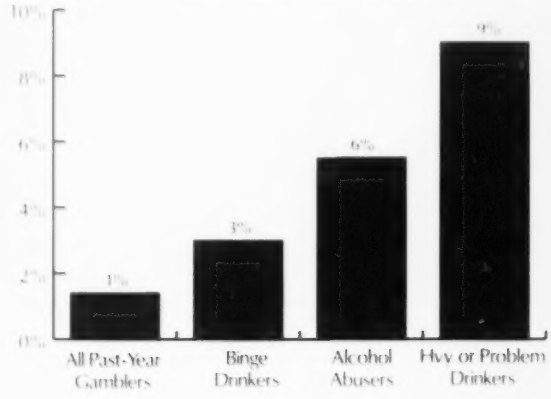
Some 8 percent of male fraternity members who were binge drinkers also exhibited problem gambling behavior.

While the percentage of students who had gambling-related problems was not high overall (although probably higher than the 1 percent found), it was high enough among certain subgroups to be cause for concern. For example, some 8 percent of male fraternity members who were binge drinkers also exhibited problem gambling behavior.

Is problem gambling among college students merely an example of "youthful excess" that will resolve as these students mature, or is it a precursor to chronic gambling problems later in life? Only a longitudinal study can identify which individual problem gamblers will mature out of their addiction and which will go on to continued problems after graduation. However, many adult problem gamblers first began gambling in their teens or earlier,[13] and it is therefore important to be alert to the potential for gambling abuse by students and to address problems through education and prevention efforts before they escalate.

College and university counselors should be trained to identify problem gambling behavior among students and learn about the resources that are available to deal with this issue. Problem gambling should join alcohol and drug abuse as a focus of prevention efforts among college students. The Texas Commission on Alcohol and Drug Abuse funds the Texas Problem Gambling Helpline, a 24-hour crisis intervention and gambling treatment information line at 1-800-742-0443. The Texas Council on Problem and Compulsive Gambling (972-889-2331) can provide training, resources, and information about problem gambling prevention.

Figure 5.3. Percentage of Problem/Pathological Gamblers Among Different Groups of College Students Who Gambled in the Past Year: Texas, 1997



BEST COPY AVAILABLE

DRINKING AND DRIVING

Most students (77 percent) at Texas universities drive almost every day. Unfortunately, many do not heed the warnings against driving while intoxicated. About 28 percent of students said they drove after drinking once or more than once during the past month, and 10 percent said they drove after drinking five or more drinks (Table 5.2).[14] Thirteen percent of all students believed they could consume four or more drinks in an hour and still drive safely. On the positive side, many students served as designated drivers (50 percent) and took advantage of designated drivers (42 percent). Unfortunately, about 21 percent of students still said they rode as a passenger with a drunk driver in the past month, and some students (14 percent) reported that they drank more than one drink when they last served as a designated driver.

Underage students who drank alcohol in the past month were less likely than students 21 or older who drank in the past month to drive after drinking alcohol and to drive after consuming five or more drinks (Table 5.3). Younger students were more likely than students 21 or older to believe that under the influence of one drink they could no longer drive safely. Underage students were just as likely as older students to ride with an intoxicated driver, take advantage of designated drivers, and serve as designated drivers. However, older students were more likely than students younger

Table 5.2. Percentage of College Students Who Reported Specific Driving Behaviors During the Past Month: Texas, 1997

	Total
Drove after drinking alcohol	
Never	72.8%
Once	11.9%
More than once	15.8%
Drove after having 5 or more drinks	
Never	89.8%
Once	5.4%
More than once	4.8%
Drinks able to consume in 1 hour and still drove safely	
Zero	16.9%
One	29.2%
2 to 3	41.1%
4 or more	12.8%
Rode with a driver who was high or drunk	
Never	79.5%
Once	10.1%
More than once	10.4%
Rode with a designated driver	
Never	58.1%
Once	13.7%
More than once	28.2%
Served as a designated driver	
Never	49.8%
Once	19.2%
More than once	31.0%
Drinks consumed when designated driver last time	
Zero	71.1%
One	14.8%
2 to 3	10.9%
4 or more	3.3%

Table 5.3. Percentage of Past-Month Alcohol Users in College Who Reported Specific Driving Behaviors in the Past Month, by Age: Texas, 1997

	Total	Age 18-20	Age 21-26
Drove after drinking alcohol	38.8%	33.2%	44.3% *
Drove after having 5 or more drinks	14.7%	12.3%	16.3% *
Number of drinks able to consume in 1 hour and still drive safely			
Zero	9.6%	12.7%	7.4% *
One	27.2%	24.0%	29.5%
2 to 3	47.3%	46.3%	48.0%
4 or more	15.9%	17.1%	15.0%
Use of designated drivers			
Rode with a driver who was high or drunk	27.1%	28.1%	26.5%
Rode with a designated driver	56.4%	55.8%	56.9%
Served as a designated driver	60.2%	59.9%	60.4%
Number of drinks consumed when designated driver last time			
Zero	62.6%	66.1%	60.2% *
One	19.0%	15.3%	21.6%
2 to 3	14.3%	13.6%	14.7%
4 or more	4.2%	5.1%	3.6%

* Differences between younger and older students are significant at $p < .05$.

BEST COPY AVAILABLE

Binge drinkers were more likely than non-binge drinkers to put themselves and others at risk as a result of drinking and driving.

Table 5.4. Percentage of Past-Month Alcohol Users in College Who Reported Specific Driving Behaviors in the Past Month, by Binge Drinking: Texas, 1997*

	Non-Binge Drinkers	Binge Drinkers
Drove after drinking alcohol	24.2%	58.7%
Drove after having 5 or more drinks	3.9%	29.4%
Drinks able to consume in 1 hour and still drive safely		
Zero	12.9%	5.3%
One	36.5%	14.9%
2 to 3	42.7%	53.4%
4 or more	7.9%	26.4%
Rode with a driver who was high or drunk	13.0%	46.4%
Rode with a designated driver	43.8%	73.6%
Served as a designated driver	55.8%	66.2%
Drinks consumed when designated driver last time		
Zero	72.9%	49.7%
One	18.6%	19.4%
2 to 3	7.4%	22.8%
4 or more	1.1%	8.1%

*Differences between non-binge and binge drinkers are significant for each variable at $p<.05$.

than 21 to have drunk alcohol the last time they served as a designated driver.

Binge drinkers were more likely than non-binge drinkers to put themselves and others at risk as a result of drinking and driving (Table 5.4). Among students who drank in the past month, binge drinkers were more likely than non-binge drinkers to drive after drinking, to drive after consuming five or more drinks, and to believe they could still drive safely after drinking more than one drink. Binge drinkers were also more likely than non-binge drinkers who drank in the past month to ride with a drunk driver, ride with a designated driver, and serve as a designated driver. Binge drinkers were also more likely than non-binge drinkers to report that they drank the last time they served as a designated driver.

RISKY SEX

There are at least 15 sexually transmitted diseases (STDs) currently prevalent in the US heterosexual population.[15] One study found that more than one in four sexually active heterosexuals in college had experienced some form of sexually transmitted disease.[16] Genital herpes, warts, and chlamydial infections are especially common among college students.[17] The incidence of STDs among college students is particularly alarming because the presence of certain STDs facilitates the transmission of human immunodeficiency virus (HIV). Recent studies show that unprotected heterosexual intercourse, in the presence of genital ulcer diseases (e.g., chancroid, syphilis, and herpes) and perhaps genital *C trachomatis*, substantially increases the risk for HIV.[18] Due to these risks, it is imperative that sexually active and non-monogamous college students always use protection.

About 67 percent of all college students in this survey said they have ever had sexual intercourse. Students who lived with parents or other relatives were less likely than students who lived apart from their parents or other relatives to have had sex. Among students who have had sexual intercourse, about one-third did not have sex within the last month. The majority of students who have been sexually active had only one sexual partner within the past month, and only 7 percent reported having two or more partners within the past month (Table 5.5). Though a small majority of students who have been sexually active said they always used a condom (54 percent), 18 percent said they only sometimes used a condom, 7 percent said they rarely used a condom, and 21 percent said they never used one.

About 18 percent of students who have been sexually active reported they were drinking the last time they had sex, and about 3

BEST COPY AVAILABLE

percent said they were using drugs the last time they had sex. Among students who drank alcohol in the past year, 7 percent said that at least once they failed to use protection *as a result of drinking*. Men were more likely than women to have ever had sex, to have drunk alcohol the last time they had sex, and to have failed to use protection as a result of drinking.

Table 5.6 presents factors associated with the failure to use protection during sex as a result of drinking. The sample includes only those students who drank alcohol within the past year and who have had sex. Fraternity and sorority members were more likely than non-Greeks to fail to use protection as a result of drinking. Students with two or more sexual partners were more likely than students with no current partner or a single partner to fail to use protection as a result of drinking. The fact that 19 percent of students with more than one partner failed to use a condom is especially alarming because people with multiple partners, in the absence of consistent condom use, have an increased risk for sexually transmitted diseases.[19] Not surprisingly, students who misused alcohol were more likely than other students to fail to use protection as a result of drinking.

About 18 percent of students who have been sexually active reported they were drinking the last time they had sex, and about 3 percent said they were using drugs the last time they had sex.

Table 5.5. Descriptive Analysis of College Students' Reported Sexual Activity, by Gender: Texas, 1997[1]

	Total	Female	Male
All Students			
Ever Had Sexual Intercourse	66.6%	64.9%	68.4%
Students Who Have Ever Had Sex			
Number of Sexual Partners Within Last 30 Days			
Zero	13.8%	29.4%	14.1%
One	61.6%	67.6%	55.8%
More than One	6.6%	2.9%	10.2%
Frequency of Condom Use			
Always	53.6%	49.5%	57.7%
Sometimes	17.9%	17.4%	18.4%
Rarely	6.8%	7.8%	5.8%
Never	21.4%	24.8%	18.1%
Frequency of Other Contraceptive Use			
Always	43.3%	54.9%	32.1%
Sometimes	9.6%	7.0%	12.1%
Rarely	5.4%	4.5%	7.0%
Never	41.0%	34.2%	47.4%
Drank Alcohol Before Last Sexual Intercourse	77.7%	72.2%	84.0%
Used Other Drugs Before Last Sexual Intercourse	3.1%	2.0%	4.2%
Students Who Have Ever Had Sex and Who Have Drunk Alcohol in the Past Year			
Frequency of Unplanned Sex as a Result of			
Never	81.6%	93.4%	72.1%
Once	8.8%	4.6%	12.9%
More than once	9.5%	4.0%	14.8%
Frequency of Failure to Use Protection During As a Result of Drinking			
Never	90.6%	93.8%	87.5%
Once	3.6%	0.7%	5.2%
More than once	4.3%	2.6%	5.9%

[1] Differences between females and males are significant for each variable at $p < .05$.

Endnotes

1. Hecht 1995, Layden 1995, Thatcher 1994, Maher 1998, Curry 1998.
2. See Shaffer, Hall, and Vander Bilt 1997 for a full listing.
3. Maher 1998.
4. Massachusetts Council on Compulsive Gambling 1998.
5. Ibid.
6. Wallisch 1996.
7. Ibid.
8. To compute the percentage of problem and pathological gamblers among all college students, those students who did not bet on a regular basis in the past year (and who were not asked the problem questions) were coded as not being problem gamblers.
9. Wallisch 1996.
10. The percentages shown in Figure 5.2 for "other college students" come from the Shaffer, Hall, and Vander Bilt study (1997) and

BEST COPY AVAILABLE

reflect the average percentages for all the college student studies included in their meta-analysis. There are several reasons to believe that the rates of problem gambling reported here are underestimated as compared to the estimates derived from the TCADA gambling surveys. First is the fact that this survey focused on substance use and only asked the gambling questions at the end of the survey, whereas the gambling surveys of adults and adolescents focused primarily on gambling activities and related problems. There is evidence that higher percentages of participation and problems are reported when surveys are focused on the behavior in question. A more important reason is that, in the college student survey, only regular bettors were asked the problem questions, while the gambling surveys queried all past-year bettors about their problems. Over one-third of all adults who were found to be past-year problem or pathological gamblers had not gambled regularly during that year. Therefore, the college survey may have missed a substantial number of gamblers who may have problems but were not queried about them.

A recent study of college students in 12 universities in the Southeastern Conference of the NCAA also documented higher percentages of problem gambling among athletes than non-athletes (Rockey 1998; Wallisch 1996).

In a statewide survey of adults in Texas, 43 percent admitted to having ever driven after having too much to drink (Wallisch 1994).

Catania et al. 1995.

Reinisch et al. 1992.

Batterger and Jones 1987, Becker et al. 1986, Vail-Smith and White 1992.

Quinn et al. 1988, Pepin et al. 1989, cited in MacDonald et al. 1990.

Siegel et al. 1992, Catania et al. 1995, Michael et al. 1998, MacDonald et al. 1990.

Table 5.6. Percentage of Sexually Active Past-Year Alcohol Users in College Who Failed to Use Protection as a Result of Drinking, by Selected Variables: Texas, 1997*

Gender	
Male	12.5%
Female	6.2%
Fraternity/Sorority Member	
Non-Member	8.7%
Member	13.5%
Number of Sexual Partners Within Last 30 Days	
Zero	5.9%
One	10.1%
More Than Once	19.0%
Frequency of Unplanned Sex as a Result of Drinking	
Never	3.7%
Once	34.7%
More Than Once	35.6%
Binge Drinker	
No	3.6%
Yes	17.7%
Got Drunk Often	
No	6.2%
Yes	20.0%

* Associations between variables and failure to use protection are significant at $p < .05$.

BEST COPY AVAILABLE

Chapter 6. Consequences of Substance Misuse

While Chapters 2 and 3 emphasize factors associated with the use and misuse of substances, this chapter highlights possible consequences of substance use and misuse. Of the social problems asked about in the survey (physical assault, sexual assault or date rape, racial tension, suicide, heavy alcohol use, and drug abuse), students chose heavy alcohol use and drug abuse as the greatest problems facing university students. Similar percentages of students believed heavy alcohol use and drug abuse were "moderate" problems (Figure 6.1). But, a much greater percentage of students perceived heavy alcohol use as a "major" problem on their campuses.

Figure 6.1. Percentage of College Students Describing the Extent of Social Problems at Their Universities: Texas 1997

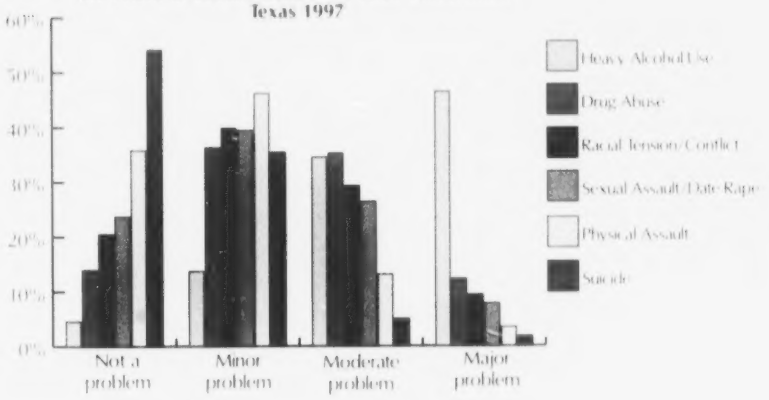


Table 6.1. Percentage of College Students with Specific Grade Point Averages, by Binge Drinking and Past-Month Illicit Drug Use: Texas, 1997

	Total	Binge Drinker		Past-Month Illicit Drug User		
GPA		No	Yes	No	Yes	*Marijuana Only*
A	26.0%	28.0%	21.3%	26.5%	22.8%	27.6%
B	57.8%	58.2%	56.8%	58.0%	56.2%	52.8%
C to C	14.8%	12.9%	19.3%	14.2%	18.4%	17.9%
C to F	1.3%	0.9%	2.8%	1.3%	2.7%	1.8%

SUBSTANCE USE AND SCHOOL PERFORMANCE

Studies show that the misuse, not the use, of alcohol is negatively associated with grade point average and college completion rates.[1] The Texas study showed that binge drinkers were less likely than non-binge drinkers to earn A's and more likely to receive C's, D's, and F's (Table 6.1). Past-month illicit drug users also had problems with school performance. These students were slightly less likely to earn A's and slightly more likely to receive poor grades than students who did not use illicit drugs in the past month. Students who had used marijuana only in the past month but no other illicit drug were not less likely to earn A's.

Reasons for low grade point averages may be related to study habits. Binge drinkers were more likely than non-binge drinkers to study less than one hour per day (Table 6.2). Binge drinkers were also nearly five times as likely as non-binge drinkers to miss class due to drinking, and they were nearly four times as likely as non-binge drinkers to fall behind in school work due to drinking. Among students who used drugs in the past year, about one in five studied less than one hour per day, missed a class, or fell behind in school as a result of using drugs (Table 6.3).

Comparison of Table 6.2 and Table 6.3 shows that students who misused alcohol were more likely to report missing class and falling behind in school as a result of drinking than drug users were to report these problems as a result of drug use. Moreover, past-year drinkers in general were more likely to report missing a class as a result of drinking than past-year

BEST COPY AVAILABLE

drug users were to report missing class as a result of using drugs.

OTHER PROBLEMS RELATED TO SUBSTANCE USE

Table 6.2 also shows percentages of students who experienced other negative consequences at least once as a result of drinking. Sixty-four percent of students who drank alcohol in the past year reported that they have suffered at least one negative consequence since the beginning of the school year as a result of drinking. Not surprisingly, except for having a hangover, binge drinkers were more likely than non-binge drinkers to have suffered these consequences.

Many students who used inhalants or any illicit drug within the past year also had negative experiences as a result of using drugs (Table 6.3). Again, past-year alcohol users were more likely to report these problems as a result of drinking than past-year drug users were to report them as a result of using drugs. Overall, binge drinkers were much more likely to report alcohol-related problems than drug users were to report drug-related problems.

Table 6.2. Percentage of College Students Who Experienced Problems Since the Beginning of the School Year as a Result of Drinking, by Binge Drinking: Texas, 1997*

	Total	Non-Binge Drinker	Binge Drinker
Problems Related to School Performance			
Missing class	26.3%	11.0%	54.7%
Falling behind in school	20.5%	10.2%	38.9%
Studying less than 1 hour per day	15.7%	13.4%	19.8%
Other Problems			
Hangover	51.9%	33.5%	84.8%
Regret after doing something	29.7%	17.3%	51.9%
Argument with friend	25.0%	15.1%	42.9%
Temporary memory loss	19.0%	9.4%	36.1%
Physical injury	8.5%	3.8%	17.0%
Failure to use protection during sex	7.0%	2.5%	15.2%
Property damage	6.3%	2.4%	13.4%
Trouble with police	4.9%	1.5%	11.1%

* Table includes only students who have drunk alcohol in past year, and all differences between non-binge drinker and binge drinker are significant at $p<.05$.

Table 6.3. Percentage of College Students Who Experienced Problems Since the Beginning of the School Year as a Result of Drug Use: Texas, 1997*

Problems Related to School Performance	
Studying less than 1 hour per day	20.3%
Missing class	19.2%
Falling behind in school	18.2%
Other Problems	
Hangover	38.8%
Regret after doing something	17.6%
Argument with friend	14.6%
Temporary memory loss	15.4%
Failure to use protection during sex	4.9%
Physical injury	4.4%
Property damage	4.0%
Trouble with police	3.0%

* Includes only students who have used inhalants or an illicit drug in past year.

COMPARISON TO STUDENTS NATIONWIDE

Table 6.4 compares the percentage of college students in Texas who experienced negative consequences of drinking to the percentage of college students nationwide. Among students nationwide, female and male binge drinkers were about equally likely to report most of the negative consequences of drinking addressed in the surveys, the exceptions being trouble with police and destruction of property, which were more often reported by males. In Texas, male binge drinkers were more likely than female binge drinkers to feel regret after doing something, experience temporary memory loss, fall behind in school, fail to use protection during sex, report trouble with police, and damage property. Female binge drinkers in Texas were just as likely as male binge drinkers to have a hangover, miss class, argue with a friend, and

BEST COPY AVAILABLE

suffer physical injury as a result of drinking.

When comparing women in Texas to women nationwide, female binge drinkers in Texas were less likely than female binge drinkers nationwide to fail to use protection during sex as a result of drinking, but were more likely to have a hangover, miss class, or argue with a friend. When comparing men in Texas to men nationwide, male binge drinkers in Texas were more likely than males nationwide to fall behind in school, miss class, argue with a friend, and have trouble with the police as a result of drinking. Male binge drinkers nationwide appeared more likely than male binge drinkers in Texas to damage property as a result of drinking.

Table 6.4. Percentage of College Binge Drinkers with Alcohol-Related Problems in Texas (1997) and Nationwide (1993), by Gender

	Texas		Nationwide	
	Female	Male	Female	Male
Hangover	87%	84%	81%	82%
Missing class	56%	53%	42%	45%
Regret after doing something	47%	54% *	48%	50%
Argument with friend	42%	43%	29%	32%
Temporary memory loss	34%	37% *	38%	41%
Falling behind in school	34%	42% *	31%	34%
Physical injury	14%	18%	14%	17%
Failure to use protection during sex	10%	18% *	15%	16%
Trouble with police	4%	15% *	4%	10%
Property damage	4%	18% *	6%	24%

Sources: *1997 Texas Survey of Substance Use Among University Students* and the national College Alcohol Study, 1993 (Wechsler 1996)
* Differences between males and females in Texas are significant at $p<.05$.

Table 6.5. Percentage of College Students Who Suffered Consequences as a Result of Someone Else's Drinking: Texas, 1997

	Total	Non-Binge Drinker	Binge Drinker
Had to "babysit" or care for another student who drank too much	47.7%	37.8%	71.6% *
Had study or sleep interrupted	42.3%	37.0%	55.2% *
Had a serious argument or quarrel	26.5%	18.8%	45.2% *
Been insulted or humiliated	20.2%	16.0%	30.5% *
Had property damaged	13.6%	9.8%	23.0% *
Experienced an unwanted sexual advance	11.7%	8.0%	20.8% *
Been pushed, hit, or assaulted	6.5%	3.7%	13.2% *
Been a victim of sexual assault or date rape	1.3%	1.1%	1.6%

* Differences between binge and non-binge drinkers are significant at $p<.05$.

PROBLEMS RELATED TO SOMEONE ELSE'S DRINKING

The behavior of students who misuse alcohol affects the lives of others as well as themselves (Table 6.5). The most common consequences suffered as a result of another student's drinking were having to care for a drunken student and having sleep or studying interrupted. Less common but still prevalent consequences included getting into a serious argument, being insulted or humiliated, and experiencing an unwanted sexual advance. Women (14 percent) were slightly more likely than men (10 percent) to have experienced an unwanted sexual advance. More serious consequences included property damage, physical assault, and sexual assault. Binge drinkers tended to suffer all of these disturbances and actions more often than non-binge drinkers, perhaps because they were more likely to associate with other problem drinkers or because binge drinking made them more vulnerable to victimization. They were over twice as likely as non-binge drinkers to get into a serious argument, have property damaged, receive an unwanted sexual advance, and be a victim of physical assault as result of someone else's drinking.

The most common consequences suffered as a result of another student's drinking were having to care for a drunken student and having sleep or studying interrupted.

BEST COPY AVAILABLE

DRUGS INGESTED UNKNOWINGLY

Unfortunately, some college students unknowingly ingest drugs and may suffer as a result. Eleven percent of students reported that they personally knew someone who had been slipped a drug without permission. Among the students who knew someone who had been slipped a drug, the most commonly cited drugs were Rohypnol (32 percent) and LSD (16 percent).

Endnote

1 Hsu et al. 1995, Cook and Moore 1993, cited in Chaloupka 1996.

BEST COPY AVAILABLE

Chapter 7. Current Need for Intervention Services and Students' Treatment Experience

The Texas study found that 16 percent of all Texas college students were abusing drugs and/or alcohol at the time of the survey, meaning that they had suffered six or more negative experiences due to their substance use since the beginning of the school year. Although this study did not specifically assess substance dependence, which is a more severe situation characterized by continued or compulsive use of substances despite significant problems and the development of tolerance and withdrawal symptoms, it is likely that a small proportion of college students in Texas are, in fact, dependent on alcohol and/or drugs and need treatment.[1]

While individuals who are dependent on substances may be in more obvious need of immediate chemical dependency treatment, many of those who abuse substances need intervention to help them reduce their use and the adverse consequences of their use. Intervention also helps forestall a progression to possible substance dependence. Any student who abuses alcohol or other drugs is in need of intervention services.

Only 10 percent of binge drinkers and 14 percent of alcohol abusers believed they had a drinking problem.

NEED FOR INTERVENTION SERVICES

Several factors are taken into account when determining the relative need for intervention and treatment services among different groups and in different regions. One such factor is motivation for treatment. Recognizing or admitting that one has a problem is a first step in becoming motivated for treatment. Some university students in Texas did acknowledge they had problems with alcohol, suggesting they might be ready to take steps to limit their drinking. Nearly one-quarter of all students had ever felt the need to limit their drinking (Table 7.1). Forty-six percent of binge drinkers and 61 percent of alcohol abusers reported they had ever felt the need to cut down on their drinking. Somewhat fewer students reported feeling guilty about drinking, and fewer still were annoyed by criticism of their drinking. Few students admitted to ever needing a morning drink to help themselves "get going." Though some students did express concern over their drinking, few believed they had a drinking problem. Only 10 percent of binge drinkers and 14 percent of alcohol abusers believed they had a drinking problem. Students who misused alcohol and also expressed concern about their drinking behaviors might be the

Table 7.1. Percentage of College Students Who Expressed Concerns with Regard to Drinking, by Binge Drinking and Alcohol Abuse: Texas, 1997

	Total	Binge Drinker	Non-Binge Drinker	Alcohol Abuser	Non-Alcohol Abuser
Felt the need to cut down on drinking	23.9%	46.2%	14.7%	60.8%	17.2%
Felt guilty about drinking	17.7%	24.5%	14.8%	35.8%	14.3%
Became annoyed with criticism	8.6%	15.1%	6.0%	20.3%	6.5%
Thought I had a drinking problem	4.9%	9.5%	2.9%	14.1%	3.2%
Needed drink first thing in the morning to get going	1.2%	2.7%	0.5%	4.4%	0.7%

BEST COPY AVAILABLE

Three percent of college students reported ever having a drug problem, and about 3 percent were abusing drugs at the time of the survey.

most likely to take advantage of treatment services. Those students who admitted they had a drinking problem and were abusing alcohol represented only about 2 percent of the entire college population (Table 7.2).

Students who were abusing alcohol and who did not believe they had a drinking problem might represent the students most in need of services but the least likely to take advantage of them. These students (86 percent of all alcohol abusers and 13 percent of the entire student body) may benefit from intervention services that encourage recognition of their problems and provide strategies for dealing with them.

Three percent of college students reported ever having a drug problem, and about 3 percent were abusing drugs at the time of the survey. Twenty-one percent of the students who reported ever having a drug problem were abusing drugs at the time of the survey. Students who admitted that they had a drug problem and were abusing drugs at the time of the survey represented less than 1 percent of the entire student body (Table 7.2)

In Texas, one-third of all students used alcohol and an illicit drug or an inhalant in the past year, and about 13 percent used alcohol and another drug in the past month. Among students in Texas who used both alcohol and another drug within the past year, those who were abusing alcohol (25 percent) were much more likely than those who were not (5 percent) to also abuse drugs. About 2 percent of the entire college student sample were abusing both alcohol and drugs at the time of the survey.

Table 7.2. Percentage of College Students in Need of Intervention or Treatment Services: Texas, 1997

Potential Need	
Students who were abusing alcohol	15.4%
Students who were abusing drugs	2.9%
Students who were abusing either alcohol or drugs	16.0%
Need and Motivation	
Students who were abusing alcohol and believed they had a problem	2.2%
Students who were abusing drugs and believed they had a problem	0.6%
Students who were abusing alcohol and/or drugs and believed they had a problem	2.6%

PREVIOUS TREATMENT EXPERIENCE

Few students have ever sought or been to treatment for a problem with alcohol (2 percent), drugs (1 percent), or both alcohol and drugs (0.6 percent). Of the 3 percent of students who received treatment for an alcohol and/or drug related problem since starting college, half had sought treatment on campus. Among students who were abusing substances at the time of the survey, 8 percent had received treatment for an alcohol and/or drug related problem or had attended a meeting of Alcoholics Anonymous or Narcotics Anonymous since starting college.

Endnote

1 In the *1996 Texas Survey of Substance Use Among Adults*, 18 percent of respondents who classified themselves as students were found to abuse substances. This percentage was similar to the percentage found in the college survey. A further 13 percent of student respondents in the adult survey were dependent on substances, suggesting that a similar percentage might have been found among college students in the present survey, had indicators of dependence been included in the survey.

BEST COPY AVAILABLE

Chapter 8. Student Knowledge and Opinions of Substance-Related Policies and Programs of Universities

Thirty-eight percent of college students in Texas said their school prohibits all alcohol use by students, faculty, and staff on campus. The majority of students reported that their universities allow drinking, but have specific policies to discourage drunkenness, prevent student drinking, and/or encourage responsible drinking. Only 3 percent of students said their universities had no policy, and 2 percent did not know what the alcohol policy was (Table 8.1).

There appears to be widespread student support for campus-wide alcohol abuse prevention programs and policies. Among students who said their universities prohibit all drinking on campus, 65 percent supported the current policies, and 16 percent believed their university should enact even greater restrictions. Among students who said their university tolerates drinking but not drunkenness, 58 percent favored the current policy, and 35 percent favored greater restrictions. Among students who said their school discourages or tries to prevent all drinking by students, 62 percent favored the current policy, and 27 percent favored greater restrictions. Among students who said their school actively encourages responsible drinking, 61 percent favored the current policy, and 32 percent favored greater restrictions. Sixty-four percent of the students who said their university has no policy concerning alcohol use believed their school should implement some policy.

Table 8.2 shows differences in support for specific programs and policies between fraternity/sorority members and others. About 90 percent of all students said they would back their university if it were to make the rules concerning alcohol more clear, if it were to require the offering of non-alcoholic beverages when serving alcohol at campus events, and if it were to provide more alcohol-free events. About 75 percent would

Table 8.1. Percentage of College Students Who Reported Each Type of Alcohol-Related Policy at Their Universities: Texas, 1997

Prohibits all alcohol use by students, faculty, and staff on campus	37.5%
Tolerates drinking but not drunkenness or disorderly conduct	25.1%
Discourages or tries to prevent all student drinking	21.9%
Actively encourages responsible drinking	10.6%
Has no policy concerning alcohol	2.6%
Student does not know school policy	2.2%

Table 8.2. Percentage of College Students Who Would Support or Strongly Support Initiatives Related to Alcohol, by Membership in a Fraternity/Sorority: Texas, 1997

Policies To Control Alcohol Use	Total	Non-Greek	Greek	
Make alcohol related rules more clear	93.9%	94.1%	93.1%	
Require non-alcoholic beverages served at campus events	90.7%	90.5%	91.8%	
Provide more alcohol-free events	87.4%	87.4%	87.1%	
Enforce rules relating to alcohol more strictly	75.3%	76.4%	68.7%	*
Offer alcohol-free dormitories	74.7%	75.0%	73.4%	
Prohibit kegs on campus	66.3%	66.7%	63.8%	
Hold hosts responsible for problems resulting from alcohol	65.7%	66.8%	59.3%	*
Crack down on alcohol abuse by fraternity/sorority members	64.5%	67.0%	50.4%	*
Ban advertisements related to alcohol at campus events	52.3%	53.0%	48.6%	
Policies To Not Control Alcohol Use				
Abolish all rules regarding alcohol	9.9%	9.0%	15.2%	
Allow all students to drink regardless of age	7.1%	6.8%	8.7%	*

* Differences between Greeks and Non-Greeks are significant at p=.05.

BEST COPY AVAILABLE

like to see stricter enforcement of rules and the offering of alcohol-free dormitories. Many college students would also support other initiatives such as prohibitions of kegs on campus, crack-downs, and banning of advertisements for alcohol. Much smaller percentages of students would support the university if it were to abolish all rules and policies concerning alcohol on campus or if it were to allow students to drink regardless of age. Most students in Texas (58 percent) supported the existing minimum drinking age law, but 27 percent believed the minimum age for drinking should be lowered to 18 (Figure 8.1).

Fraternity/sorority members were somewhat less likely than their non-Greek peers to support campus-wide initiatives related to alcohol, yet the majority would support the initiatives. For example, support for cracking down on alcohol abuse by Greeks came from fraternity and sorority members themselves (50 percent). Fifty-nine percent of fraternity and sorority members also would support the university if it were to hold hosts responsible for problems resulting from alcohol.

Many students (43 percent) believed that campuswide policies are rarely enforced. Only 48 percent of students said their school had informed them about college rules for drinking.

Figure 8.1. Percentage of College Students Who Supported or Strongly Supported Specific Legal Drinking Ages: Texas, 1997

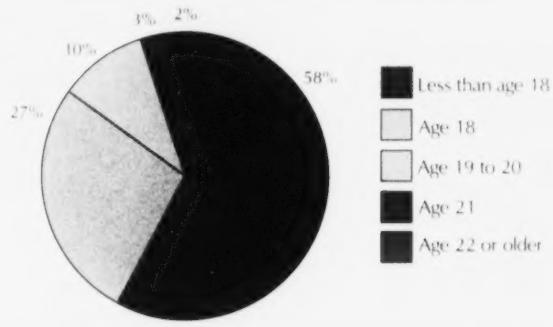


Table 8.3. Percentage of College Students Who Received Information Concerning Substance Use from Their Universities, by Membership in a Fraternity/Sorority: Texas, 1997

Type of Information	Total	Non-Greek	Greek
Where to seek help for alcohol-related problems	68.1%	67.2%	73.4% *
Information about drugs other than alcohol	59.7%	59.7%	59.9%
College rules for drinking	48.1%	46.7%	55.6% *
Dangers of alcohol overdose	41.9%	40.6%	49.3% *
Long-term health effects of heavy drinking	40.8%	40.3%	43.8% *
How to recognize when someone has a drinking problem	39.8%	38.6%	46.0% *

* Differences between Non-Greeks and Greeks are significant at $p<.05$.

An important question is whether universities would do their part to ensure that policies benefit the general student population. Many students (43 percent) believed that campuswide policies are rarely enforced. Universities in Texas have not always been successful in disseminating information about policies on alcohol consumption. This may occur either because universities have no clear policies or because universities fail to make the policies known. Only 48 percent of students said their school had informed them about college rules for drinking (Table 8.3). The majority of students did not receive information regarding the dangers of alcohol abuse, and most did not receive messages that may be valuable in preventing abuse, such as information about the long-term health effects of heavy drinking and the dangers of alcohol overdose. Also, schools have not taught students how to recognize the signs of a problem drinker. Only 40 percent of students said they had received any information regarding the recognition of warning signs from their universities. Fortunately, a majority of students (68 percent) received information about where to find help for alcohol-related problems, and many students (60 percent) received some information on drugs other than alcohol from their universities. Yet, as

BEST COPY AVAILABLE

mentioned above, fewer than half of all students received information about the dangers of drinking, information which may be the most valuable of all in preventing the misuse of alcohol.

Fraternity/sorority members were more likely than non-members to say they have received information about alcohol abuse and university policies and rules that concern alcohol use, but they were no more likely than non-Greeks to receive information about drugs other than alcohol. This finding suggests the universities and/or the fraternity and sorority chapters may have already acknowledged the greater prevalence of alcohol misuse among fraternity and sorority members and may have acted on it by providing information specifically to Greek organizations.

The relationship between receiving information and actual drinking behavior is not straightforward. Even though fraternity and sorority members were more likely than non-members to receive information, they were also more likely to misuse alcohol. Among all students, those who received information were just as likely as those who did not to binge drink. Likewise, students who described university policy on alcohol use as strict were as likely as those who described it as lenient to binge drink. These findings can have several interpretations. Perhaps the content, style, or method of presenting information needs reassessment. Other factors suggested by this study, such as the perception that drinking is more widespread than it actually is, may be more strongly associated with binge drinking than knowledge about the dangers of alcohol and alcohol-related policy. Because many college students began misusing alcohol in high school, perhaps the information provided by universities is being presented after the pattern of behavior has already been established.

Chapter 9. Conclusions

SUMMARY

Among college students in Texas, alcohol was the substance of choice, followed by tobacco and marijuana. Sixty-nine percent drank alcohol in the past month, 26 percent used tobacco in the past month, and 11 percent smoked marijuana in the past month. Though the majority of college students did not misuse alcohol, 29 percent did binge drink, and 15 percent were abusing alcohol at the time of the survey, meaning they had experienced six or more negative consequences due to their drinking since the beginning of the school year. Fourteen percent of all college students used an illicit drug in the past month, and 3 percent were abusing drugs at the time of the survey.

Binge drinking on college campuses in Texas was strongly associated with certain demographic variables, lifestyle characteristics, and high school drinking behavior. Being male, over the age of 21, Anglo, Hispanic, and having parents with an annual income of over $60,000 increased the risk for binge drinking. Lifestyle characteristics that increased the odds for bingeing included receiving low grades, being a fraternity or sorority member, and believing that drinking is a very important part of college life. Lifestyle characteristics that decreased the odds for bingeing included considering religious activities very important, living with a spouse or significant other, and living with a parent or other relative. Among all the significant predictors, having been a binge drinker in high school was the strongest.

Demographic factors played a more modest role in predicting illicit drug use. Being male increased the odds for current illicit drug use, and living in a rural area before coming to college decreased the odds for current illicit drug use. The strongest predictors for illicit drug use were binge drinking in high school, binge drinking in college, and considering participation in the arts, music, and drama to be very important. Conversely, considering participation in religion to be very important greatly decreased the likelihood for current illicit drug use. Use of illicit drugs in the past month was not associated with grade point average when controlling for other factors.

The misuse of alcohol on campus created problems, not only for those who misused alcohol, but also for those who did not. Many students said they experienced negative effects when others misused alcohol. Students who binge drank tended to suffer more negative experiences as a result of their own as well as others' drinking than those who did not binge drink.

The misuse of alcohol was associated with several other risky behaviors, including driving while intoxicated, risky sex, and problem gambling. About 28 percent of students said they have driven after drinking at least once within the past month, and 10 percent said they have driven after drinking five or more drinks. Even though many students said they have served as a designated driver and have taken advantage of designated drivers, 21 percent admitted to riding with a drunk driver, and some students even admitted to drinking when they served as a designated driver. This study showed that many university students in Texas are at risk for sexually transmitted diseases and HIV infection. Only about half of the students who were sexually active reported consistent condom use, and some reported that their failure to use protection was a result of having too much to drink. Students who gambled and also abused alcohol were three times as likely as those who gambled without alcohol problems to be problem or compulsive gamblers.

Sixty-nine percent drank alcohol in the past month, 26 percent used tobacco in the past month, and 11 percent smoked marijuana in the past month.

Students who misused alcohol and believed they had a drinking

BEST COPY AVAILABLE

Prevention efforts on campuses should address perceived norms of drinking behavior on college campuses.

problem might be the most likely to take advantage of treatment services. These students represented about 2 percent of the entire college population. Students who abused alcohol and who did not believe they had a drinking problem may represent the students most in need of services but the least likely to take advantage of them. These students (13 percent of the entire student body) may benefit from education that encourages recognition of their problems and provides strategies for dealing with them.

POLICY IMPLICATIONS

This study showed that alcohol abuse is a more prevalent problem than drug abuse on college campuses in Texas. Alcohol abuse should therefore be the primary focus of prevention and intervention programs. Initiatives focusing on alcohol will likely be appreciated and respected by the student body, who recognizes alcohol as a major problem on campus and supports the implementation of more policies and programs related to alcohol abuse prevention.

Prevention efforts on campuses should address perceived norms of drinking behavior on college campuses. The TCADA study showed that many students did not consider getting drunk often or binge drinking to be heavy or problem drinking. Few students who engaged in these behaviors described themselves as heavy or problem drinkers. Yet 81 percent of students did consider drinking to be a moderate or major problem on campus. This finding suggests that students believed their peers engaged in heavy or problem drinking, but they did not believe that they themselves were heavy or problem drinkers. This study also showed that students tended to overestimate the percentage of current drinkers and the percentage of heavy or problem drinkers at their universities. Binge drinkers and alcohol abusers tended to more greatly overestimate these percentages than students who did not binge drink or abuse alcohol.

Programs and public awareness initiatives can help to change the misperception that binge drinking and the abuse of alcohol are normal behaviors on campus. University-wide studies and awareness campaigns should emphasize the percentage of students who do not misuse alcohol, rarely drink, or do not drink at all so that students can begin to sense that responsible drinking or abstinence is the norm. If students perceive less permissive attitudes toward the misuse of alcohol, they may be less likely to misuse it themselves. If students have an accurate perception of the amount of drinking taking place on college campuses, their own drinking may be less likely to exceed it.

Many students do not respect the legal minimum drinking age. Sixty percent of students under the age of 21 drank alcohol in the past month. "Fear of getting caught" was not an important reason to limit drinking for 43 percent of the underage students who drank alcohol in the past year. The legal drinking age was also not an important reason for abstaining for 32 percent of the underage students who did not drink.

Universities appear to be doing their part by not tolerating the selling of alcohol to minors. Few students reported buying alcohol on campus. Community members and university representatives can take a more active stance and work together to enforce the legal drinking age, since many students obtain alcohol from older people or buy it using fake identifications. The reader is encouraged to refer to Anderson and Milgram's *Promising Practices: Campus Alcohol Strategies Sourcebook* (1997) for specific university programs that focus on underage drinking, or visit their web site at www.promprac.gmu.edu. In addition, since drinking behaviors often begin prior to college, high school prevention and intervention programs need to be strengthened.

Alcohol abuse prevention programs should target those students who are at greater risk: men, Anglos, Hispanics, wealthier students, students majoring in agriculture and business, and students who participate in particular organizations, such as male intercollegiate sports.[1] Membership

BEST COPY AVAILABLE

in a fraternity or sorority is strongly associated with binge drinking, and students who said that participation in fraternities or sororities was very important to them were even more likely than other fraternity and sorority members to binge drink. Hence, university administrators can decrease the misuse of alcohol by focusing their efforts on Greek organizations. The TCADA study showed that Greeks themselves supported such initiatives, and recently, the National Interfraternity Conference passed a resolution encouraging its member fraternities to pursue alcohol-free chapter facilities.[2]

Universities should encourage and facilitate inexpensive and accessible transportation throughout the night for students who have been drinking. They can follow the examples of Texas A&M University and the University of Texas at Austin, which both have successful programs. At the University of Texas at Austin, the Campus Alcohol and Drug Education Program (CADEP) oversees a designated driver program (UT-DDP), which includes free taxicab rides for students who are too intoxicated to drive. The service operates every Thursday, Friday, and Saturday night and provides students with rides to their residences, but not to other parties or bars. The UT-DDP phone bank coordinates the taxi service and dispatches the cabs only after verifying that the caller is an enrolled student and that the address given is actually the student's current residence. CADEP also coordinates a Driving Drunk Chapter that provides educational services.[3]

To prevent the spread of acquired immune deficiency syndrome (AIDS) and other sexually transmitted diseases, steps must be taken to increase condom use among sexually active college students. Campus organizations and university administrators, as they design safe sex campaigns and deliver messages about safe sex, should incorporate discussions about the misuse of alcohol and risky sex.

Problem gambling is also associated with substance misuse. Students and others who think they may have a problem with gambling or know a friend who does may call the Problem Gambling Helpline at 1-800-742-0443 for information or counseling. University administrators who wish to receive educational materials or gambling prevention resources can call the Texas Council on Problem and Compulsive Gambling at 972-889-2331.

The literature on alcohol abuse and prevention offers many specific suggestions for creating and implementing policy. Chaloupka (1996) suggests implementing policies that affect the price of alcohol. Wechsler (1996) and Wechsler et al. (1996) devised a "Twelve Step Plan" as a guide for university officials. The present study shows that many students have not received information regarding the warning signs of problem drinking, university policy on substances, or university prevention efforts. Haines (1996) describes how to design and implement specific mass media initiatives to raise awareness of these important issues.

Another valuable source for university administrators is the national Higher Education Center for Alcohol and Other Drug Prevention, which was established by the U.S. Department of Education to provide nationwide support to campuses for alcohol and drug prevention efforts. The Center works with schools of higher learning throughout the country to develop strategies for changing campus culture, to foster environments that promote healthy lifestyles, and to prevent illegal alcohol and other drug use among students. Their web page at www.edc.org/hec/pubs contains informative fact sheets, prevention updates, and articles that describe how to create and enact policy.

Also, Join Together Online, a project of the Boston University School of Public Health, is a national resource for communities working to reduce substance abuse and gun violence. Join Together offers a Binge Drinking Monthly Action Kit with facts and statistics,

The present study shows that many students have not received information regarding the warning signs of problem drinking, university policy on substances, or university prevention efforts.

BEST COPY AVAILABLE

The TCADA web site includes recent information on prevention, information on drugs of abuse, research and epidemiology, library and LitCenter services, and training opportunities.

resources, promising strategies, and action steps on their web page at www.jointogether.org. The Texas Commission on Alcohol and Drug Abuse also provides resources and information to help counselors, addiction professionals, and educators. The TCADA web site at www.tcada.state.tx.us includes recent information on prevention, information on drugs of abuse, research and epidemiology, library and LitCenter services, and training opportunities.

The Binge Drinking Resolution recently passed in the Senate as part of the Higher Education Reauthorization Act, P. L. 96-1. This resolution proposes six specific activities to reduce alcohol consumption on college campuses. Universities should 1) appoint a task force to establish a policy on reducing alcohol and other drug related problems; 2) provide students with the opportunity to live in an alcohol-free environment (alcohol-free dorms); 3) enforce a zero tolerance policy on the consumption of alcohol by minors; 4) eliminate alcoholic beverage related sponsorship of on-campus events; 5) enforce disciplinary codes against those who violate campus alcohol policies; and 6) work closely with local officials in the community. Students and university administrators can follow through with this initiative from the federal government and use it to gain support for specific programs and policies.

The majority of college students in Texas reported that they have never received information on how to recognize when someone has a drinking problem. CESAR, the Center for Substance Abuse Research, in conjunction with Drug Strategies, has launched a Drug and Alcohol Referral and Assessment (DARA) web page for University of Maryland students. The primary function of this web site is to provide a confidential and convenient way for local students to assess their risk for alcohol and other drug problems. After completing a brief screening test, students receive a score indicating their risk level. Students can then browse a list for on- and off-campus treatment resources. DARA's modular construction allows other colleges and universities to easily adapt it for their own uses. For more information about using DARA in Texas, contact Dr. Eric Wish at ewish@cesar.umd.edu or visit the web site at www.cesar.umd.edu.

Endnotes

1 Refer to Anderson and Milgram 1997 for specific programs geared toward athletes.

2 "Two Major ..." 1997.

3 Anderson and Milgram 1997.

BEST COPY AVAILABLE

Bibliography

American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, DSM-IV*. 1994. Washington, DC: American Psychiatric Association.

Anderson, David S., and G. L. Milgram. 1997. *Promising Practices: Campus Alcohol Strategies Sourcebook*. Fairfax, Virginia: George Mason University.

Batteiger, B. E., and R. B. Jones. 1987. "Chlamydial Infections." *Infectious Disease Clinics of North America* 1, pp. 55-81.

Becker, T. M. et al. 1986. "Epidemiology of Genital Herpes Infections in the United States: The Current Situation." *Journal of Reproductive Medicine* 31, pp. 359-364.

Cashin, Jeffery, C. A. Presley, and P. W. Meilman. 1998. "Alcohol Use in the Greek System: Follow the Leader?" *Journal of Studies on Alcohol* 59, no. 1 (January), pp. 67-70.

Catania, Joseph A. et al. 1995. "Risk Factors for HIV and Other Sexually Transmitted Diseases and Prevention Practices Among US Heterosexual Adults: Changes from 1990 to 1992." *American Journal of Public Health* 85, no. 11 (November), pp. 1492-1500.

Centers for Disease Control and Prevention (CDC). 1997. "Youth Risk Behavior Surveillance: National College Health Risk Behavior Survey—United States, 1995." *Morbidity and Mortality Weekly Report* 46, no. SS-6, pp. 1-56.

Chaloupka, Frank J. 1996. "Binge Drinking in College: The Impact of Price, Availability, and Alcohol Control Policies." *Contemporary Economic Policy* 14, no. 4 (October), pp. 112-125.

Cook, Philip J., and Michael J. Moore. 1993. "Drinking and Schooling." *Journal of Health Economics* (December), pp. 411-429.

Cooper, A. M. et al. 1981. "Validity of Alcoholics' Self-Reports: Duration Data." *International Journal of Addictions* 16, p. 401.

Curry, Jack, with Adam Gershenson. 1998. "Even at Columbia, Gambling and Athletics Collide." *The New York Times*, 16 February.

Darke, Shane. 1998. "Self-Report Among Injecting Drug Users." *Drug and Alcohol Dependence* 51, no. 2, pp. 253-263.

Depong, William. 1998. "Language Matters." *Catalyst* 4, no. 1 (Summer/Fall).

Dyer, J. et al. 1997. *Methodology Report for the College Students' Survey for the Texas Commission on Alcohol and Drug Abuse*. College Station, Tex.: Public Policy Research Institute, Texas A&M University.

Freier, M. C. et al. 1991. *Do Teens Tell the Truth? The Validity of Self-Report Tobacco Use by Adolescents*. Santa Monica, Calif.: RAND, RAND Publication N-3291-CHF.

Gfroerer, J. C., J. C. Greenblatt, and D. A. Wright. 1997. "Substance Use in the US College Age Population: Differences According to Educational Status and Living Arrangement." *American Journal of Public Health* 87, no. 1, pp. 62-65.

Haberman, Shirley E. 1994. "A Survey of Alcohol and Other Drug Use Practices Among College Students." *Journal of Alcohol and Drug Education* 39, no. 2 (Winter), pp. 85-100.

Haines, Michael P. 1996. *A Social Norms Approach to Preventing Binge Drinking at Colleges and Universities*. The Higher Education Center for Alcohol and Other Drug Prevention, U. S. Department of Education.

Hanson, D. J., and R. C. Engs. 1992. "College Students' Drinking Problems: A National Study, 1982-1991." *Psychological Reports* 71, pp. 39-42.

Hecht, Alex. 1995. "Breaking the Bank." *Texas Monthly* (January), pp. 122-125, 158-162.

Hetzler, J. E., and A. Burnham. 1991. "Alcohol Abuse and Dependency," in *Psychiatric Disorders in America*. Ed. L. N. Robins and D. A. Regier. New York, N.Y.: Free Press.

Hsu, M. et al. 1995. *1994 UMCP Student Drug Survey*, co-sponsored by the Center for Substance Abuse Research and the University Health Center, University of Maryland at College Park. *CESAR Fax* 6, no. 11 (March 24, 1997).

Johnston, L. D., P. M. O'Malley, and J. G. Bachman. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997, Volume II, College Students and Young Adults*. Rockville, Md.: National Institute on Drug Abuse.

Kenkel, Donald S. 1993. "Drinking, Driving, and Deterrence: The Social Costs of Alternative Policies." *Journal of Law and Economics* 36, no. 2 (October), pp. 877-913.

Layden, Tim. 1995. "Bettor Education," "Book Smart," and "You Bet Your Life." Special Report on Campus Gambling, Parts 1, 2 and 3. *Sports Illustrated* (April 3, 10 and 17).

MacDonald, Noni E. et al. 1990. "High Risk STD/HIV Behavior Among College Students." *Journal of American Medical Association* 263, no. 23 (June 20), pp. 3155-3159.

Maher, John. 1998. "Web Gambling Boosts Fears about Collegians." *Austin American Statesman*, 8 February.

Massachusetts Council on Compulsive Gambling. 1998. "Gambling on Campus." *The Weekly Addiction Gambling Educational Report (WAGER)*. Massachusetts Council on Compulsive Gambling 3, no. 43 (October 27).

Maxwell, Jane. 1998. "Substance Abuse Trends in Texas: June 1998." *TCADA Research Brief*. Austin, Tex.: Texas Commission on Alcohol and Drug Abuse.

Michael, Robert T. et al. 1998. "Private Sexual Behavior, Public Opinion, and Public Health Policy Related to Sexually Transmitted Diseases: A U.S.-British Comparison." *American Journal of Public Health* 88, no. 5, (May), pp. 749-754.

Midanik, L. 1983. "Validity of Self-Report Alcohol Use: A Literature Review and Assessment." *British Journal of Addictions* 83, pp. 1019-1 030.

Pepin, J. et al. 1989. "The Interaction of HIV Infection and Other Sexually Transmitted Diseases: An Opportunity for Intervention." *AIDS* 3, pp. 3-9.

Perkins, H. Wesley. 1991. "Confronting Misperceptions of Peer Drug Use Norms Among College Students: An Alternative Approach for Alcohol and Other Drug Education Programs." *Peer Prevention Program Manual*. Fort Worth, Tex.: The Higher Education Leaders/Peers Network, Texas Christian University.

——. 1995. "Scope of the Problem: Misconceptions of Alcohol and Drugs." *Catalyst* 1, no. 3 (Fall).

Perkins, H. Wesley, and A. D. Berkowitz. 1986. "Perceiving the Community Norms of Alcohol Use Among Students: Some Research Implications for Campus Alcohol Education Programming." *International Journal of the Addictions* 21, pp. 961-976.

Perkins, H. Wesley, and H. Wechsler. 1996. "Variation in Perceived College Drinking Norms and its Impact on Alcohol Abuse: A Nationwide Study." *Journal of Drug Issues* 26, no. 4, pp. 961-974.

Perkins, H. Wesley et al. 1998. "Misperceptions of the Norms for the Frequency of Alcohol and Other Drug Use on College Campuses." Paper presented at the annual meeting of the American Sociological Association, San Francisco, Calif., August.

Presley, C. A., P. W. Meilman, and R. Lyerla. 1995. *Alcohol and Drugs on American College Campuses: Use, Consequence, and Perceptions of the Campus Environment*, II: 1989-1991. Carbondale, Ill.: The Core Institute.

Quinn, T.C. et al. 1988. "Human Immunodeficiency Virus Infection Among Patients Attending Clinics for Sexually Transmitted Diseases." *New England Journal of Medicine* 318, pp. 197-203.

Reinisch, J. M. et al. 1992. "Sexual Behavior, Contraceptive Use, and STD History Among Heterosexual College Students: Data from a Random Sample." Paper presented at the International Conference on AIDS, July, (abstract no. PoC 4166).

Rockey, Donald L. Jr. 1998. "A Comparison of Pathological and Problem Gambling Between College Students and College Athletes." Ph.D. diss., University of Mississippi.

Shaffer, Howard J., M. N. Hall, and J. Vander Bilt. 1997. *Estimating the Prevalence of Disordered Gambling Behavior in the United States and Canada: A Meta-analysis*. Boston, Mass.: Harvard Medical School, Division on Addictions.

Siegel, D. et al. 1992. "Prevalence and Correlates of Herpes Simplex Infections: The Population-Based AMEN Study." *Journal of American Medical Association* 286, pp. 1702-1708.

Thatcher, Rebecca. 1994. "Students Charged with Operating Gambling Ring." *Austin American Statesman*, 21 December.

"Two Major Fraternities Say They Will Ban Alcohol." 1997. *Austin American Statesman*, 20 March.

Vail-Smith, K., and D. M. White. 1992. "Risk Level, Knowledge, and Preventive Behavior for Human Papillomaviruses Among Sexually Active College Women." *Journal of American College Health* 40, pp. 227-230.

Wallisch, Lynn. 1997. *1996 Texas Survey of Substance Use Among Adults*. Austin, Tex.: Texas Commission on Alcohol and Drug Abuse.

——. 1996. *Gambling in Texas: 1995 Surveys of Adult and Adolescent Gambling Behavior*. Austin, Tex.: Texas Commission on Alcohol and Drug Abuse.

——. 1994. *1993 Texas Survey of Substance Use Among Adults*. Austin, Tex.: Texas Commission on Alcohol and Drug Abuse.

Wechsler, Henry. 1996. "Alcohol and the American College Campus: A Report from the Harvard School of Public Health." *Change*, no. 4 (July-August 28), pp. 20-27.

Wechsler, Henry et al. 1994. "Health and Behavioral Consequences of Binge Drinking in College." *Journal of the American Medical Association* 272, pp. 1672-1677.

Wechsler, Henry, Bryan Austin, and W. Dejong. 1996. *Secondary Effects of Binge Drinking on College Campuses*. Bulletin Series: Alcohol and Other Drug Prevention, Higher Education Center for Alcohol and Other Drug Prevention, February.

Wechsler, Henry et al. 1998a. *Changes in Binge Drinking and Related Problems Among American College Students Between 1993 and 1997*. 1997 Harvard School of Public Health College Study, unpublished paper.

——. 1998b. "Increased Levels of Cigarette Use Among College Students." *Journal of American Medical Association* 280, no. 19 (November 18), pp.1673-1678.

——. 1995a. "Correlates of College Student Binge Drinking." *American Journal of Public Health* 85, no. 7 (July), pp. 921-926.

——. 1995b. "A Gender-Specific Measure of Binge Drinking Among College Students." *American Journal of Public Health* 85, no. 7 (July), pp. 982-986.

——. 1995c. *Binge Drinking on Campus: Results of a National Study*. Bulletin, Boston, Mass.: The Higher Education Center for Alcohol and Other Drug Prevention, August.

Winters, Ken. 1998. "Gambling and College Students." *Beyond the Odds: A Quarterly Newsletter About Problem Gambling*. Anoka, Minn.: Gambling Problems Resource Center.

Appendix A. Substance Use Prevalence Tables

Table A1. Prevalence and Recency of Substance Use Among College Students, by Gender: Texas, 1997

	Lifetime Use			Past-Year Use			Past-Month Use		
	Total	Female	Male	Total	Female	Male	Total	Female	Male
Alcohol	87.5%	86.6%	88.3%	81.9%	81.7%	82.0%	69.3%	66.1%	72.5% *
Tobacco	45.3%	39.0%	51.7%	34.9%	29.1%	40.8% *	26.1%	20.5%	31.9% *
Cigarettes	42.1%	38.8%	45.5% *	32.3%	29.1%	35.6% *	23.9%	20.5%	27.4% *
Smokeless Tobacco	13.4%	2.0%	25.1% *	8.2%	1.1%	15.5% *	5.5%	-	10.9% *
Any Illicit Drug	34.2%	29.9%	38.5%	23.3%	18.8%	27.9% *	13.8%	9.3%	18.3% *
Marijuana	29.3%	24.7%	34.0%	17.9%	13.5%	22.5% *	11.0%	7.1%	14.9% *
Marijuana Only**	12.8%	11.3%	14.4%	9.4%	6.9%	11.9% *	6.8%	4.1%	9.6% *
Psychedelics	12.2%	10.4%	14.0%	6.5%	4.7%	8.4% *	3.1%	2.0%	4.2% *
Uppers	9.9%	9.2%	10.7%	5.3%	4.2%	6.5% *	2.0%	1.4%	2.7% *
Other Opiates	7.7%	6.1%	9.3%	5.4%	4.2%	6.7% *	2.2%	1.4%	2.9% *
Club Drugs	7.7%	5.9%	9.4%	3.4%	2.5%	4.2% *	1.0%	-	1.8%
Downers	5.8%	4.3%	7.3%	3.5%	2.5%	4.5% *	1.7%	1.3%	2.1%
Inhalants	5.4%	3.1%	7.8%	2.1%	1.0%	0.0% *	0.7%	-	1.1%
Cocaine	5.1%	3.7%	6.4%	2.8%	1.9%	3.8% *	1.1%	-	2.7%
Crack	1.3%	1.4%	1.5%	0.7%	0.7%	0.7%	-	-	-
Steroids	0.8%	-	1.4%	-	-	-	-	-	-
Heroin	0.6%	0.6%	0.7%	-	-	-	-	-	-

* Differences between females and males are significant at $p<.05$.

** "Marijuana Only" indicates use of no other illicit drug besides marijuana.

- Less than .5 percent

Table A2. Prevalence and Recency of Substance Use Among College Students, by Race/Ethnicity: Texas, 1997

	Lifetime Use				Past-Year Use				Past-Month Use			
	Anglo	Hispanic	Asian**	African American	Anglo	Hispanic	Asian**	African American	Anglo	Hispanic	Asian**	African American
Alcohol	88.4%	90.6%	79.3%	81.6%	83.2%	85.7%	71.1%	74.1%	71.8%	71.7%	54.2%	57.0%
Tobacco	49.4%	43.0%	36.4%	19.7%	38.9%	30.9%	26.4%	14.3%	29.4%	21.5%	19.9%	9.6%
Cigarettes	45.4%	40.8%	35.4%	19.7%	35.5%	29.6%	25.6%	14.3%	26.5%	20.6%	19.4%	9.6%
Smokeless Tobacco	16.5%	8.7%	5.2%	2.9%	10.6%	4.0%	2.0%	1.4%	7.3%	2.0%	0.7%	0.5%
Any Illicit Drug	36.6%	33.8%	22.1%	26.6%	25.1%	23.1%	14.2%	18.1%	15.1%	14.1%	8.4%	6.6%
Marijuana	32.3%	27.6%	15.9%	20.5%	19.9%	17.5%	8.6%	12.0%	12.1%	11.5%	5.9%	5.6%
Marijuana Only*	13.2%	13.1%	6.8%	17.0%	10.5%	8.3%	2.8%	9.9%	7.6%	6.4%	2.6%	4.7%
Psychedelics	14.2%	10.0%	8.0%	2.1%	6.9%	7.3%	6.6%	1.4%	3.3%	3.4%	2.8%	1.2%
Uppers	10.6%	11.6%	7.4%	2.5%	5.4%	7.2%	4.5%	1.8%	1.9%	3.8%	0.8%	1.6%
Other Opiates	8.2%	7.9%	4.4%	5.9%	5.7%	6.1%	3.0%	5.3%	2.3%	2.5%	1.7%	-
Club Drugs	8.6%	7.5%	6.0%	1.2%	3.3%	5.0%	3.7%	1.2%	0.8%	2.2%	0.7%	1.2%
Downers	6.6%	4.7%	4.5%	1.4%	4.1%	2.9%	2.5%	0.8%	2.0%	1.9%	0.6%	-
Inhalants	6.4%	4.0%	4.6%	-	2.2%	2.7%	1.7%	-	0.6%	1.9%	-	-
Cocaine	5.6%	4.7%	4.1%	1.8%	3.1%	2.9%	2.8%	1.2%	1.0%	1.3%	0.9%	1.2%
Crack	1.5%	1.4%	2.4%	-	0.7%	0.9%	1.8%	-	-	0.6%	0.9%	-
Steroids	1.0%	0.7%	-	-	-	-	-	-	-	-	-	-
Heroin	0.6%	0.7%	0.5%	0.8%	-	0.6%	-	0.8%	-	0.6%	-	-

* "Marijuana Only" indicates use of no other illicit drug besides marijuana.

** "Asian" refers to Asians, Pacific Islanders, and Indians.

- Less than 0.5 percent

BEST COPY AVAILABLE

Table A3. Prevalence and Recency of Substance Use Among College Students, by Age: Texas, 1997

	Lifetime Use		Past-Year Use		Past-Month Use	
	Age 18-20	Age 21-26	Age 18-20	Age 21-26	Age 18-20	Age 21-26
Alcohol	82.7%	91.9%	77.4%	86.2%	60.1%	77.8%
Tobacco	41.0%	49.3%	34.0%	35.9%	24.7%	27.3%
Cigarettes	38.1%	45.9%	31.4%	33.1%	22.4%	25.3%
Smokeless Tobacco	11.1%	15.6%	7.3%	8.9%	4.8%	6.1%
Any Illicit Drug	29.8%	38.3%	22.7%	23.9%	13.2%	14.3%
Marijuana	24.5%	33.8%	17.6%	18.4%	10.8%	11.1%
Marijuana Only*	11.8%	13.8%	8.7%	10.1%	6.0%	7.6%
Psychedelics	9.5%	14.7%	7.3%	5.9%	3.7%	2.6%
Uppers	8.0%	11.7%	5.5%	5.2%	2.4%	1.7%
Other Opiates	7.0%	8.4%	5.6%	5.3%	2.3%	1.9%
Club Drugs	5.9%	9.4%	3.8%	3.1%	1.1%	1.0%
Downers	4.9%	6.6%	3.5%	3.7%	1.6%	1.9%
Inhalants	4.3%	6.5%	2.7%	1.6%	1.3%	–
Cocaine	3.8%	6.2%	3.0%	2.7%	1.1%	1.0%
Crack	1.4%	1.6%	1.1%	0.5%	–	–
Steroids	0.6%	1.1%	–	–	–	–
Heroin	–	0.9%	–	–	–	–

* "Marijuana Only" indicates use of no other illicit drug besides marijuana.

– Less than 0.5 percent

Table A4. Prevalence and Recency of Substance Use Among College Students, by Membership in a Fraternity/Sorority: Texas, 1997

	Lifetime Use		Past-Year Use		Past-Month Use	
	Non-Greek	Greek	Non-Greek	Greek	Non-Greek	Greek
Alcohol	86.2%	92.1%	80.6%	89.3%	67.4%	80.2%
Tobacco	43.3%	56.5%	32.9%	46.7%	24.8%	33.5%
Cigarettes	40.1%	53.4%	30.4%	43.3%	22.7%	30.4%
Smokeless Tobacco	12.1%	20.7%	6.7%	16.6%	4.5%	10.9%
Any illicit drug	33.2%	39.5%	22.7%	27.1%	13.1%	17.4%
Marijuana	28.4%	34.1%	17.4%	21.6%	10.6%	13.2%
Marijuana Only*	12.5%	14.8%	9.1%	11.4%	6.4%	8.7%
Psychedelics	12.3%	11.7%	6.6%	6.6%	2.9%	4.1%
Uppers	9.5%	12.3%	5.0%	7.6%	1.8%	3.4%
Other Opiates	7.9%	6.8%	5.7%	4.5%	2.1%	2.5%
Club Drugs	7.7%	7.6%	3.4%	3.7%	0.9%	1.7%
Downers	5.6%	6.6%	3.3%	5.1%	1.6%	2.4%
Inhalants	5.5%	5.2%	2.1%	2.3%	0.7%	0.6%
Cocaine	4.9%	5.7%	2.7%	3.8%	1.2%	-
Crack	1.5%	1.2%	0.8%	0.7%	-	-
Steroids	0.6%	2.0%	-	-	-	-
Heroin	0.6%	0.8%	-	-	-	-

* "Marijuana Only" indicates use of no other illicit drug besides marijuana.
- Less than 0.5 percent

Table A5. Prevalence and Recency of Substance Use Among College Students, by Class Standing: Texas, 1997

	Lifetime Use				Past-Year Use				Past-Month Use			
	Freshman	Sophomore	Junior	Senior	Freshman	Sophomore	Junior	Senior	Freshman	Sophomore	Junior	Senior
Alcohol	81.3%	85.4%	88.5%	91.7%	75.6%	80.8%	83.1%	85.5%	57.5%	65.2%	72.2%	76.4%
Tobacco	42.7%	41.2%	44.6%	49.8%	35.1%	34.0%	35.8%	34.9%	26.0%	24.6%	28.0%	25.9%
Cigarettes	40.1%	37.4%	42.3%	45.9%	32.9%	30.7%	33.7%	31.9%	23.7%	22.1%	26.5%	23.8%
Smokeless Tobacco	12.4%	12.5%	12.6%	15.1%	8.6%	8.0%	7.8%	8.4%	5.0%	5.8%	5.2%	5.9%
Any Illicit Drug	31.3%	29.3%	34.1%	38.8%	24.2%	20.1%	23.9%	24.1%	14.4%	11.5%	14.5%	14.9%
Marijuana	25.9%	24.1%	29.5%	34.2%	18.9%	15.4%	18.9%	18.4%	11.9%	9.8%	10.3%	11.6%
Marijuana Only*	12.3%	11.9%	14.0%	12.8%	9.5%	7.5%	10.3%	10.0%	6.0%	6.2%	6.7%	7.7%
Psychedelics	9.6%	8.5%	12.2%	15.8%	7.9%	4.5%	7.4%	6.4%	3.4%	3.2%	4.5%	2.6%
Uppers	8.0%	7.9%	9.1%	12.8%	5.4%	5.2%	5.7%	4.9%	2.9%	1.5%	2.0%	1.9%
Other Opiates	7.0%	6.9%	8.2%	8.2%	5.6%	5.6%	6.3%	4.8%	2.4%	1.9%	2.7%	1.8%
Club Drugs	5.4%	4.8%	7.5%	10.8%	4.0%	2.4%	2.9%	4.1%	1.2%	0.7%	1.1%	1.1%
Downers	4.8%	5.5%	5.4%	6.7%	3.6%	4.1%	2.8%	3.7%	1.5%	1.7%	1.2%	2.2%
Inhalants	3.9%	4.7%	4.6%	7.3%	2.4%	2.4%	2.4%	1.6%	0.8%	1.0%	1.0%	0.2%
Cocaine	5.0%	4.1%	4.5%	6.0%	4.1%	2.5%	2.7%	2.3%	1.6%	0.8%	1.4%	0.7%
Crack	1.9%	1.7%	0.8%	1.7%	1.4%	1.1%	–	–	0.6%	–	–	–
Steroids	0.8%	–	0.3%	1.4%	–	–	–	–	–	–	–	–
Heroin	–	1.0%	0.3%	0.8%	–	0.5%	–	–	–	–	–	–

*Marijuana only = indicates use of no other illicit drug besides marijuana.

– Less than 0.5 percent

Table A6. Prevalence and Recency of Substance Use Among College Students, by Parental Annual Household Income: Texas, 1997

	Lifetime Use			Past-Year Use			Past-Month Use		
	0 to $20K	20K to 60K	60K Plus	0 to $20K	20K to 60K	60K Plus	0 to $20K	20K to 60K	60K Plus
Alcohol	84.0%	86.7%	89.0%	72.1%	80.2%	85.2%	57.4%	65.5%	75.0%
Tobacco	35.6%	41.2%	51.4%	27.1%	31.0%	40.1%	19.8%	23.5%	30.0%
Cigarettes	34.7%	38.4%	47.1%	26.8%	28.8%	36.5%	18.7%	21.8%	26.9%
Smokeless Tobacco	7.4%	11.1%	16.9%	4.6%	6.5%	10.8%	3.3%	4.3%	7.3%
Any Illicit Drug	29.2%	29.8%	40.9%	18.4%	20.1%	28.3%	10.2%	11.7%	16.7%
Marijuana	24.2%	24.3%	36.1%	14.1%	14.6%	22.4%	8.1%	9.2%	13.3%
Marijuana Only*	11.3%	11.1%	15.3%	7.6%	8.0%	11.7%	5.3%	5.6%	8.4%
Psychedelics	12.2%	10.3%	14.5%	6.6%	6.1%	7.4%	2.8%	3.1%	3.3%
Uppers	5.7%	8.4%	12.4%	2.2%	4.2%	7.0%	0.8%	2.0%	2.4%
Other Opiates	5.5%	7.0%	9.1%	5.0%	5.4%	5.9%	2.9%	1.9%	2.1%
Club Drugs	5.3%	5.9%	10.1%	3.0%	2.4%	4.6%	–	0.7%	1.6%
Downers	3.6%	5.6%	6.3%	2.2%	3.2%	4.1%	–	1.3%	2.4%
Inhalants	4.4%	4.5%	6.3%	–	1.4%	2.7%	–	–	0.9%
Cocaine	4.3%	4.0%	6.4%	1.0%	2.4%	3.8%	–	1.1%	1.1%
Crack	–	1.8%	1.3%		0.8%	0.6%			
Steroids		0.8%	1.1%						
Heroin	0.8%	0.5%	0.7%						

*"Marijuana Only" indicates use of no other illicit drug besides marijuana.

– Less than 0.5 percent

Appendix B. Gambling Questions

Please think about your experiences when you gambled in the past year.

1. In the past year, when you bet on those activities, how often did you go back another day to try to win back money you lost?

2. In the past year, did you ever spend either more time or more money gambling than you intended?

3. Have people criticized your gambling in the past year?

4. In the past year, have you ever felt guilty about the way you gamble or about what happens when you gamble?

5. Have you ever felt that you would like to stop gambling, but didn't think that you could?

6. In the past year, did you ever miss time from work or school due to gambling?

7. Have you lost or jeopardized a significant relationship because of your gambling?

8. Have you ever been in trouble with the law because of activities related to gambling?

9. Did you ever borrow from someone and not pay them back as a result of your gambling?

I am going to read a list of ways in which some people get money for gambling. Can you tell me which of these, if any, you have used in the past year to get money for gambling or to pay gambling debts?

10. Did you ever borrow from household money or use money that was intended for other expenses, such as food or living expenses, to gamble or pay gambling debts?

11. Did you borrow money from your family or relatives in the past year in order to gamble or to pay gambling debts?

12. In the past year, did you ever make cash withdrawals on credit cards to get money to gamble or to pay gambling debts?

13. Did you ever borrow from your checking account by writing checks that bounced to get money for gambling or to pay gambling debts?

14. In the past year, did you ever take money from someone without him or her knowing it, or shoplift, or steal in some other way in order to get money to gamble or to pay gambling debts?

15. Do you feel that you have had a problem during the past year with betting money or gambling?